In the Matter Of:

Affordable Wire Management, LLC vs

Cambria County for the Blind & Handicapped

MINH P. DOAN

November 15, 2024

LEXITAS™

CONFIDENTIAL PROTECTIVE ORDER MATERIAL

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

AFFORDABLE WIRE MANAGEMENT, LLC
Petitioner,

VS.

CAMBRIA COUNTY ASSOCIATION FOR
THE BLIND AND HANDICAPPED, INC.,
Patent Owner

IPR 2024-00178
Patent 11,349,291

****
ORAL DEPOSITION OF

MINH DOAN

NOVEMBER 15, 2024

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ORAL DEPOSITION OF MINH DOAN, produced as a witness at the instance of the Patent Owner and duly sworn, was taken in the above-styled and -numbered cause on the 15th of November, 2024, from 9:34 a.m. to 4:24 p.m., before Melisa Duncan, CSR in and for the State of Texas, reported by machine shorthand, at the offices of Lexitas, 325 N. St. Paul, Suite 1900, Dallas, Texas, in accordance with the Federal Rules of Civil Procedure and agreement hereinafter set forth.

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A P P E A R A N C E S

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CAB, EX2071
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1 P R O C E E D I N G S
2 MINH DOAN,
3 having been first duly sworn, testified as follows:
4 EXAMINATION
5 BY MR. FLYNN:
6 Q. Good morning, Ms. Doan.
7 A. Good morning.
8 Q. My name is Ed Flynn. And I represent the patent
9 owner, Cambria County Association for the Blind and
10 Handicap -- use the acronym "CAB" -- in these two IPR
11 proceedings that you're here to testify about today that
12 were commenced by the petitioner, Affordable Wire
13 Management, AWM, in IPR Number 2024-00178 relating --
14 excuse me -- relating to Patent Number 11,349,291. And
15 IPR 2024-00139 relating to U.S. Patent Number 10,177,551.
16 Okay. I'll be asking you a series of
17 questions today regarding the declarations that you have
18 submitted in these IPRs on behalf of AWM. You have
19 submitted declarations on behalf of AWM, one declaration
20 in each IPR; is that correct?
21 A. That's correct.
22 Q. And your declarations set forth your expert
23 opinions that you've been engaged to render in these -- in
24 these matters; is that correct?
25 A. Yes.

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Q. As I understand your declarations, your opinions are limited to the issue of commercial success as one of the secondary considerations of non-obviousness relating to the '291 and '551 patents; is that correct?

A. Correct.

Q. Okay. I'm going to just put them in front of you right off the bat, so you can have something to refer to when you want to or need to. I'm going to hand you a copy of each declaration.

MR. FLYNN: We have submitted -- is it Melisa? Yeah. We -- what we're doing here is --

Do we have any new exhibits? I don't think we do.

MR. SCHMIDT: No, I don't think so.

MR. FLYNN: Okay. Then, never mind. What I was going to tell you is not necessary. So I'll just tell you that what we're doing is we use exhibits that have been previously marked in these things -- so we don't have to have you re-mark them.

Q. (BY MR. FLYNN) So, Ms. Doan, I'm going to hand you two declarations -- copies of two declarations that you have submitted. The first one is -- it's Exhibit 1055. And that is in the '178 IPR, which relates to the '291 patent. And the other declaration is Exhibit 1061, which is in the '139 IPR relating to the

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'551 patent. I'll give those to you.

A. Thank you.

Q. Take a look at them if you'd like. And can you confirm that they are the declarations that you have submitted in these cases?

A. Correct. These are the two declarations I submitted.

Q. Ms. Doan, are those two declarations, are they identical?

A. No, they are not.

Q. Do you know -- and I'm not going to test you -- but do you know off the top of your head substantively what the differences are between each declaration?

A. Sure.

Q. Could you point those out to me, please.

A. I will do my best.

Q. Okay.

A. So first of all, I prepared my declaration in the '178 IPR first. When I prepared my second declaration, in the '139 IPR, a number of changes I made include the following: First, I change references from the '139 patent to the '551 patent where applicable and where it made sense. Secondly, the various citations to Putnam declarations, I change the page number where it made sense. Number three, the various exhibits that were

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1 previously cited in the '178 IPR were changed to
2 equivalent numbers in the '139 IPR. Next, there was a
3 section of my report in the '291 patent IPR that was
4 removed from my declaration in the IPR for the '551
5 patent.
6 Q. And what section was that, Ms. Doan?
7 A. I'm looking for it. Give me a second.
8 Q. Okay. Sure.
9 A. So Section 6(a)6. CAB Claim Standard System has
10 not achieved commercial success. But it's on Dr. Putnam's
11 own benchmark. That section was in my declaration in the
12 '178 IPR. It's not in my declaration in the '139 IPR
13 because the standard system doesn't practice the '551
14 patent according to the representations in the Putnam
15 declaration. So that section is not applicable in my
16 declaration in the '551 patent IPR.
17 Q. You said that the standard system does not
18 practice the invention of the '551 patent, correct?
19 A. Yes. According to the Putnam declaration.
20 Q. Have you reviewed the '291 and '551 patents in
21 these matters?
22 A. Only at a high level because I'm an economist.
23 I'm not a technical expert. So I only look at the patents
24 at a high level to the extent they are applicable to my
25 work.

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Q. So your testimony that the standard system does not practice the invention of the '551 patent is based upon your reading of Dr. Putnam's declarations in these IPR proceedings; is that correct?

A. Yes. In conjunction with certain citations to the Phinney declarations that Dr. Putnam had in his declaration.

Q. Did you read Dr. Phinney's declaration?

A. Only certain portions. Mostly those cited in the Putnam declarations.

Q. Did you read Dr. Kern's declaration in the '178 IPR relating to the '291 patent?

A. Yes. Only certain portions.

Q. And what portions would they have related to?

A. They relate to a general description of the standard system. These are portions that were cited in the Putnam declaration as well as in my declaration.

Q. Okay. So your testimony, based on your reading of Dr. Putnam's declaration, is that the standard system does not practice the invention of the '551 patent, correct?

A. Yes. I believe that's what Dr. Putnam said.

Q. Do you have an understanding as to whether CAB's integrated grounding system practices the invention of the '291 patent?

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A. I don't have an opinion on that matter. I understand from the Putnam declaration that Dr. Putnam represents the standard system to practice both the '291 and the '551 patent.

Q. You mean the integrated grounding system?

A. I apologize. Let me -- let me repeat.

Q. Sure.

A. I understand from the Putnam declaration that he represents the integrated system to practice both the '291 and the '551 patent.

Q. So it's the same understanding that you have about the integrated grounding system, that it practices both the inventions of the '551 and '291 patents, based on Dr. Putnam's declaration, correct?

MR. DIXON: Objection, form.

A. That is Dr. Putnam's representations which I -- which I referred to in my answer.

(Recess from 9:44 a.m. to 9:47 a.m.)

Q. (BY MR. FLYNN) So, Ms. Doan, do I understand correctly, then, that you removed the Section 6(a)(6) that you had included in your '178 declaration -- when I say "'178" I'm referring to the '178 IPR -- that you removed the section that you had included in that declaration from the '139 declaration?

A. Correct.

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1 Q. And the reason you did that is because, based
2 upon your reading of Dr. Putnam's declaration, the
3 standard system does not practice the claimed invention of
4 the '551 patent, correct?
5 MR. DIXON: Objection, form.
6 A. Yes. I removed that section based on
7 Dr. Putnam's assumption relating to the integrated system
8 not practicing the '291 patent -- apologies. I'm going to
9 say it again. I had a typo in what I just said.
10 I removed the section based on Dr. Putnam's
11 assumption that the standard system does not practice the
12 '551 patent.
13 Q. (BY MR. FLYNN) And because of Dr. Putnam's
14 assumption that the standard system does not practice the
15 '551 patent, you didn't believe or don't believe that the
16 commercial success of the standard system is relevant to
17 the commercial success of the integrated grounding system;
18 is that right?
19 MR. DIXON: Objection, form.
20 A. The commercial success -- the claimed commercial
21 success of the standard system is not relevant to my
22 evaluation of Dr. Putnam's analysis of the commercial
23 success of the '551 patent.
24 Q. (BY MR. FLYNN) And that's because the standard
25 system does not practice the '551 patent, correct?

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A. Based on Dr. Putnam's representation, correct.

Q. Okay. Ms. Doan, Appendix B of your declaration in each IPR identifies the materials that you reviewed and considered in connection with your declaration; is that right?

A. Correct.

Q. How did you determine which materials to review and consider in connection with your declarations?

A. When I began this case, I asked the attorneys to send me all the exhibits and the papers from both the patent owner's side and the petitioner's side in the '178 IPR and the '139 IPR. So that is the initial set of documents that I received, which are reflected in my Appendix B. From that set, I narrowed down the set of documents that I actually relied on in writing my declarations. Those are the documents that were cited in the footnotes and exhibits of the Putnam declaration. So I went from the bigger set to the smaller set, which are those documents cited by Dr. Putnam. And, then, as I prepared my declarations, there were a few additional exhibits and depositions that were relevant to the opinions I was drafting -- I was writing in these declarations. And I reviewed those other documents and depositions as well in writing my declarations.

Q. So if I understand, then, correctly, you

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1 received as the universe of documents, the documents --
2 all of the exhibits and the filings in both IPR
3 proceedings from both the petitioner and the patent owner.
4 You received that entire universe of documents from
5 counsel, correct?
6 A. Correct.
7 Q. And then you whittled down or narrowed down that
8 universe to the documents that you relied upon in
9 rendering your opinions?
10 A. Correct.
11 Q. And the documents that you relied upon in
12 rendering your opinions, they are all of the exhibits and
13 documents that you cite to in footnotes in your
14 declarations?
15 A. Yes. With one -- one small augmentation. Those
16 documents I ultimately relied on, I cited in the footnotes
17 to my declaration, as you stated, as well as cited in the
18 sources to my exhibits. My declaration has a number of
19 exhibits at the end --
20 Q. Yes.
21 A. -- and my exhibits have sources. So the sources
22 that are listed in my exhibits are also included in the
23 set of documents I relied on.
24 Q. I understand. Thank you.
25 You have provided deposition testimony

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1 previously; is that true?
2 A. Yes.
3 Q. How many times have you been deposed?
4 A. I have been deposed nine times. This is my
5 deposition number ten.
6 Q. There's some honor in being the tenth, don't you
7 think?
8 Of those nine previous depositions, did they
9 all relate to patent cases or patent matters?
10 A. They relate to both patent matters as well as
11 general commercial litigation matters.
12 Q. So of those nine, how many related to patent
13 matters?
14 A. I'm looking at my Appendix --
15 Q. Sure.
16 A. -- A.
17 Q. If you find it, you could point out the page to
18 me, I'll look with you.
19 A. It's page -- I'm looking at my declaration in
20 the '178 IPR. And it's page 73 of 117. It's the page
21 number to the right. Four of these depositions relate to
22 patent matters.
23 Q. Did you say four of these cases?
24 A. Four of the cases in which I provided either
25 deposition or trial testimony are patent-related matters.

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Q. So I see -- on page 73 of 117, I see two cases identified that specifically reference patent infringement damages, that -- the GCP Applied Technology case and the California Expanded Metal Products Company case; is that correct?

A. Number 9 and Number 10.

Q. Yes.

A. Were damages evaluation in patent infringement cases.

Q. Yes.

A. Number 5 was the follow-on case of Number 10, which relate to the contempt of an injunction of cessation of infringing products. So it's -- just a follow-on case.

Q. Okay.

A. And Number 4 relates to the alleged breach of a license agreement leading to unpaid royalties. That's Number 4 on the list.

Q. And the royalties relating to a patent -- licensing the patent?

A. Exactly.

Q. Got it. In any of those cases, did you render testimony -- expert testimony on the issue of commercial success?

A. Not in the cases that I listed on page 73. However, my experience over the last 17 years encompasses

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1 a lot more than the cases listed on page 73. I have done
2 numerous cases relating to the commercial success as a
3 secondary consideration in a legal capacity.
4 Q. When you said you have done numerous cases, what
5 do you mean you have done "numerous cases"?
6 A. The cases listed on page 73 were cases in which
7 I was either deposed or provided trial testimony. In
8 addition to these matters, over the past 17 years, I
9 worked on numerous cases in the IP arena, including cases
10 on commercial success, in which I played a lead role in
11 leading a team supporting another expert who were
12 providing opinions in those cases.
13 Q. So in those matters, you did not provide
14 testimony either by way of declaration or deposition or
15 trial testimony, but you did support the -- a different
16 expert witness, who did provide testimony either by
17 deposition, declaration, or trial testimony; is that
18 correct?
19 A. That is correct.
20 Q. And you said -- I think I heard you say you were
21 the lead person that directed the team or supervised the
22 team that did that kind of support work; is that right?
23 A. Correct.
24 Q. In those cases in which you worked on the issues
25 relating to commercial success, did you simply -- strike

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1 that.
2 In those cases in which you supported the
3 expert's testimony on commercial success, was your role
4 and the role of your team to provide information to
5 support that expert's opinion; or did you derive the
6 opinion yourself and provide it to the expert, which you
7 then supported?
8 A. We worked as a team in which we prepare
9 documents. We review documents. We did the analysis and
10 we assisted the expert in writing their reports.
11 Ultimately the opinions provided were the opinions of the
12 expert, but the work was done as a team led by me as the
13 case manager.
14 Q. I understand.
15 Are those matters that you're referring to,
16 are they identified on pages 66 and 67 of your declaration
17 in the '178 IPR?
18 A. That is correct. Page -- I would note that the
19 cases listed in my Appendix A are exemplary cases. They
20 don't reflect all the cases that I have done since I
21 started the profession in 2007.
22 Q. Do they reflect all of the cases that you have
23 worked on that relate to the issue of commercial success?
24 A. They -- they -- I will say they reflect a large
25 portion of those cases, but likely not all of the cases

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because I don't keep my CV updated on a monthly basis. And there are some cases in which we provided consulting support that did not end up resulting in a report. Those cases likely are not listed or described in my Appendix A.

Q. These four commercial success cases that you list on pages 66 and 67 of your declaration, I assume they were all -- they were four separate cases; is that correct?

A. Correct. And I would say that the third bullet under "Commercial Success" actually involved three different cases.

Q. What were the names of those cases -- let me rephrase the question. I didn't mean the three additional questions that you just mentioned with respect to the third bullet. I'm talking about the four different matters, one of them including three different cases. Do you know the names of those cases?

A. I can give you as best as I can.

Q. Sure.

A. Some of which I don't remember fully. The first one, I believe it was an IPR for Cisco, but I can't tell you the name of the parties exactly.

Q. When was that?

A. That would have been a decade ago.

Q. And the support work -- strike that.

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1 The expert opinions for which you provided
2 support on the issue of commercial success, were they on
3 behalf of the patent owner or were those opinions on
4 behalf of the petitioner in that IPR proceeding?
5 A. I believe it was on behalf of the petitioner.
6 Q. Same question for the second bullet-point matter
7 on page 67.
8 A. So the second -- in the second bullet, this is
9 not a matter in the IPR. This is a U.S. district court
10 matter in which the plaintiff, asserting patent
11 infringement, issued an economic report in which the
12 expert for the plaintiff alleged issues of commercial
13 success and a nexus to the patented invention based on the
14 sales and profits of the accused products. And in that
15 case we worked on preparing a rebuttal report to the
16 report that asserted commercial success and nexus issues.
17 Q. So the rebuttal report you worked on in that
18 case was opining that there was insufficient evidence of
19 commercial success; is that correct?
20 A. I don't remember the exact opinions, but it
21 would have been along the line that there was an
22 insufficient nexus between the commercial success and the
23 asserted patents.
24 Q. And what was the name of that case that you can
25 recall and the time frame of it?

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A. This was a case for Amazon. I believe the plaintiff was VB Assets.

Q. DB Assets?

A. "V" like in "voice." VB Assets.

Q. What district court was it?

A. I do not recall. And this would have been within the last three years.

Q. Let's jump down to the fourth bullet. What kind of a case was that; IPR district court, or something else?

A. This was -- in the third bullet, this refers to --

Q. The fourth bullet. Now jump down to the fourth bullet, if you will.

A. The fourth bullet was also a district court case that is currently ongoing. We've been working on this case for the last three, four months. Because it's ongoing, I prefer not to mention the name of the case.

Q. The -- I won't certainly ask you to divulge any confidential information, but the name of the case and where it's pending, that wouldn't be considered to be confidential. So I would ask you, if you can tell me, the name of the case and where it's pending.

A. It is Curevac. The plaintiff's name is Curevac, C-u-r-e-v-a-c, versus Pfizer and Biontech, B-i-o-n-t-e-c-h.

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Q. B-o --
A. B-i-o-n-t-e-c-h, Biontech.
Q. Okay. And where is that case pending?
A. Unfortunately, I don't remember off the top of my head where it's pending, but it will be easily found based on litigation filed by Curevac against Pfizer and Biontech.
Q. Do you know generally what district -- not specific district court, but what state the district court sits in?
A. Unfortunately, it escapes me right this moment. I can look it up if you would like at a break.
Q. And that's currently pending?
A. Yes.
Q. Okay. And in that case it's the same situation where you are doing support work for the expert that is testifying and rendering opinions in that case, correct?
A. Yes, I lead the support team.
Q. And are you representing the patent owner or the accused infringer in that case?
A. Our clients are the accused infringers.
Q. I didn't ask you, I don't think. The VB assets versus Amazon case, are you -- is your client Amazon in that case?
A. Yes.

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Q. And they are the accused -- accused infringer in that case, correct?

A. Yes.

Q. All right. Now we can jump back to the third one. If you would, tell me what that -- what that's about.

A. The third one -- in the third one there were three cases. It was Transocean that is on the plaintiff's side, T-r-a-n-s-c-o-e-n [sic], Transocean. And the -- and these are U.S. district court cases. The -- the defendants in one case, it was Stena Drilling. Stena, S-t-e-n-a. In another case it was Pacific, P-a-c-i-f-i-c, Pacific. And the third one, the name of the company is escaping me at the moment.

Q. Okay. Are those cases pending?

A. I don't believe so. This would have been six to seven years ago.

Q. And where were those cases?

A. I believe it was in Texas, but I can't tell you the exact district at the moment.

Q. And so this -- these were the cases that related to the -- a breach of the licensing agreement for the patent royalties; is that correct?

A. No.

Q. Oh.

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A. These were cases involving the secondary considerations of commercial success and also licensing. In these cases, we also evaluate the license agreements as a secondary consideration.

Q. Okay. I understand. And in those cases is your client -- or are your clients the patent owners or the accused infringers?

A. The clients were the accused infringers.

Q. So you have never worked either as a expert yourself who provided the testimony, or in support of another expert who provided testimony, on behalf of a patent owner on the issues of commercial success; is that true?

A. That is not correct.

Q. Okay.

A. A few months ago I was hired as an expert on behalf of Teva Pharmaceuticals. Potentially it would have been rendering an opinion on commercial success for the patent owner, Teva Pharmaceutical, in a Hatch-Waxman matter. However, the case went away before I was able to issue my report. And that case is not listed here because I didn't have an opportunity to issue a report.

Q. In the case -- Cases 9 and 10 listed on page 73 of your declaration --

A. Yes.

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Q. -- the GCP Applied Technology and California Expanded Metal Products case. For type of case, you've indicated patent infringement damages for both of those cases, correct?

A. Yes.

Q. Did -- and these are cases that you actually did provide the testimony on; is that right?

A. Correct.

Q. Did those patent infringement damages cases involve at all the issue of commercial success as a secondary consideration?

A. I have done hundreds of patent infringement cases over my career, including these two cases. And I would say that in pretty much all patent infringement cases, we evaluate the Georgia-Pacific factors, one of which is Georgia-Pacific Factor 8. And that is the commercial success of the product, the profitability of the product made under the invention. In all of my patent infringement matters, including Number 9 and 10 on page 73, I also evaluated the Georgia-Pacific Factor 13, which goes to the issue of nexus. It's the portion of the profits granted to the invention apart from other factors.

So if you look broadly at commercial success as part of the Georgia-Pacific analysis in patent infringement damages cases, then these two cases listed on

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1 page 73 certainly includes those issues.
2 Q. So your consideration of commercial success in
3 those two cases was in the context of the Georgia-Pacific
4 Factors. That's what I understand you to be saying,
5 correct?
6 A. Correct.
7 Q. But did you -- did those cases involve the issue
8 of commercial success -- strike that.
9 Did your testimony address the issue of
10 whether the commercialized products embodying the patents
11 at issue -- whether they achieved sufficient commercial
12 success as a secondary consideration of non-obviousness?
13 A. No. Those cases did not involve me testifying
14 to those issues.
15 Q. And in those cases -- I'm sorry if I asked you
16 already -- were you representing the patent owner or the
17 accused infringer?
18 A. I was -- our clients were the patent owner.
19 Q. Thank you.
20 Ms. Doan, is it your understanding that to
21 establish commercial success -- strike that.
22 Is it your understanding that commercial
23 success, as a secondary consideration of non-obviousness,
24 is usually established by showing significant sales of the
25 commercialized product embodying the claimed invention in

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a relevant market?

A. It would be more than that. The commercial success based on --

Q. Whether it would be more than that, my question first is, is significant sales in a relevant market -- is that a factor that is usually relied upon in determining whether or not there is commercial success?

A. Yes. And I would clarify that when economies looks at significant sales in a relevant market, economies look at the significant sales, whether or not sales are significant relative to a properly defined benchmark in a relevant market.

Q. I understand.

A. In addition to many other factors.

Q. Would you agree that significant sales in a relevant market measured against an appropriate benchmark, would you agree that that is the most important factor in demonstrating commercial success?

A. I do not. Commercial success is a holistic analysis, where you would need to look at both the supply side -- for example, is the patented product generating profits -- in addition to the demand side, which relates to showing significant sales relative to properly defined benchmarks, putting into context the sales and profits of the product.

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1 Q. Do I understand from your testimony that you
2 consider profits to be a prerequisite to establishing
3 commercial success as a secondary consideration of
4 non-obviousness?
5 A. It's a case-by-case inquiry. But in my
6 experience in a lot of the cases, profitability of the
7 patented product is a necessary condition for commercial
8 success. In fact, Dr. Putnam stated in his declarations
9 that on the supply side, profitability is necessary, but
10 not sufficient for commercial success.
11 Q. We'll get to that -- we'll get to that portion
12 of Dr. Putnam's declaration. But my question to you is,
13 is it your testimony that in establishing commercial
14 success as a secondary consideration of non-obviousness,
15 profitability is a prerequisite?
16 A. In my experience in the vast majority of cases I
17 have done, establishing the profitability of the -- of the
18 patented product is an important and essential component
19 of establishing commercial success.
20 Now, there are always some edge cases --
21 there are always some cases that are where you have to pay
22 specific attention to those cases that are based on the
23 specific facts in those cases. For example, like
24 Dr. Putnam testified to, there may be situations where the
25 patent owner doesn't achieve profits right away, but there

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1 is an expectation that the patent owner will get to profit
2 soon. So what I'm saying is, while profitability is
3 generally a consideration -- an important consideration,
4 you do need to look at the specific facts of the case.
5 Q. Aside from the edge cases that you referred to,
6 is it your understanding under applicable law that in
7 order to establish commercial success as a secondary
8 consideration of non-obviousness, it is necessary to show
9 profitability?
10 A. I'm not speaking as a lawyer. I'm speaking as
11 an economist. As an economist, it is correct that to
12 establish commercial success, we generally evaluate
13 whether or not the products are profitable.
14 Q. If you would turn to Paragraph 30 of your
15 declaration in the '178 IPR. And, Ms. Doan, just going
16 forward, to the extent that the paragraphs are the same in
17 each declaration, I'll just refer to the one declaration
18 as opposed to having you look at both of them. If there
19 are differences between one declaration or another, we'll
20 deal with those. But I think for purposes of Paragraph
21 30, they are the same. Let me refer back. Yes.
22 So in Paragraph 30 of your declaration, you
23 state about halfway through the paragraph, "I further
24 understand that, in evaluating commercial success, courts
25 have traditionally looked for evidence of (a) significant

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1 sales and market share or profit of the product that
2 embodies the patented invention in the relevant
3 marketplace," in parentheses and in quotes, "(marketplace
4 success) . . ." Do you see that?
5 A. Yes.
6 Q. At the end of that sentence, you cite Footnote
7 76, correct?
8 A. Yes.
9 Q. And in Footnote 76, you refer to two federal
10 circuit decisions, correct?
11 A. Yes.
12 Q. Did you actually read those decisions?
13 A. I may have read it a long time ago, not
14 necessarily in the last month or so.
15 Q. Or in conjunction with this declaration?
16 A. No. In conjunction with this declaration, I
17 looked specifically at the portions that I'm citing in
18 these opinions.
19 Q. Do you recall whether there was any portion in
20 either or both of those decisions or opinions that refer
21 to profitability?
22 A. You'll have to show me those decisions. In
23 writing this sentence in my report, as you can see in
24 Footnote 76, I'm saying, "See, for example." I'm not
25 saying that these two opinions alone support the sentence

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I'm writing. It is part of the support. And also based on my experience doing commercial success cases, that's how I arrived at the sentences written in Paragraph 30 of my declaration.

Q. So my question is, does either of the cases that you cite in Footnote 76, or any other cases that you may be familiar with that you don't cite in Footnote 76, are you aware of whether any of those cases require profitability in order to establish commercial success as a secondary consideration of non-obviousness?

A. I don't know about these specific cases specifically. But as I mentioned, I'm speaking as an economist having done numerous patent infringement cases looking at, for example, Georgia-Pacific Factor 8. As you can see on the face of Georgia-Pacific Factor 8, it's talking about the profitability of the patented product; and, hence, for an economist, profitability is part of the equation you look at to evaluate commercial success holistically.

Q. Would you agree, Ms. Doan, that if it were established that a commercialized product embodying the claimed invention experienced significant sales in a relevant market as compared against an appropriate benchmark, that that would establish commercial success as a secondary consideration of non-obviousness even if there

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1 was not a showing of profitability?
2 A. Even Dr. Putnam wouldn't agree with that.
3 Q. I'm asking your opinion.
4 A. I do not. You would have to do a holistic --
5 Q. I'm sorry. You do not what?
6 A. I do not agree with that premise.
7 Q. Okay. Thank you.
8 Ms. Doan, you have reviewed and considered
9 CAB's sales of its standard system and integrated
10 grounding system products or systems in these matters,
11 correct?
12 A. Yes. With one clarification. I have reviewed
13 CAB's sales data that has various parts, which Dr. Putnam
14 say can be combined together to constitute the standard
15 system and the integrated system. The clarification I
16 want to make here is, there is no line item in CAB's sales
17 data that says "standard system," that says "integrated
18 system." So you are not able to -- one is not able to
19 look at the sales data and specifically group these line
20 items to standard systems and these line items to
21 integrated system.
22 Q. You have reviewed, I take it, sales data
23 information that identifies various part numbers of CAB
24 components, correct?
25 A. Correct.

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Q. You have reviewed, I take it, various documents such as requests for proposal or bid documents, that identify individual part numbers, correct?

A. Correct.

Q. And you have seen that those bid documents or request for proposals specified an integrated grounding system or a system that does not have integrated grounding, correct?

A. You'll have to show me the specific RFPs for me to confirm whether or not it actually specifies the standard system or integrated system. Because off the top of my head, I can only recall RFPs that identify part numbers.

Q. Did you review -- strike that.

I'm going to hand you --

Ms. Doan, I'm going to hand you the two declarations submitted -- submitted by Dr. Putnam in these proceedings. The first declaration -- well, they're both Exhibit 2044 -- 2044 in the '178 IPR and 2044 in the '139 IPR as well. Okay.

A. Thank you.

Q. You have reviewed both of these declarations in these matters, correct?

A. Correct.

Q. And you have relied on them in rendering your

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1 opinions in these cases?
2 A. I have evaluated these declarations. That is my
3 assignment in this case, to evaluate Putnam declarations.
4 Q. Appendix 2.1 of Dr. Putnam's declaration,
5 page 50 of 52, identifies -- or sets forth CAB's sales
6 information of its solar products from 2015 to 2023. That
7 would include sales of both the standard system and
8 integrated grounding system, correct?
9 A. You said pages 50 and 52?
10 Q. 50 of 52. Well, I actually should say also
11 pages 51 of 52 as well. Appendix 2.2 on page 51.
12 A. Right. So I see -- in the '178 IPR, I see
13 page 51 of 52 in the Putnam declaration that sets forth
14 the sales of various CAB components from 2015 through
15 2023.
16 Q. Exhibit 2 to your declaration, if you would take
17 a look at that please.
18 A. Yes.
19 Q. And in Exhibit 2 of your declaration, you also
20 sat -- set forth sales of CAB's components that were
21 included in Dr. Putnam's calculations, correct, from 2014
22 to 2023?
23 A. Correct. Why -- my Exhibit 2 includes 2015.
24 Dr. Putnam's Appendix 2.2 does not include 2014. And my
25 Exhibit 2 includes both dollar sales and unit sales.

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Dr. Putnam's Appendix 2.2 reflects only dollar sales. Both Exhibit 2 of my declaration and his Appendix 2.2 exclude 1-carrier hangers, J-hooks, and rings. That will be a summary of the comparison.

Q. Appendix 2.2 of Dr. Putnam's declaration on page 51 of 52 -- excuse me -- identifies sales of the identified components in 2015 of [redacted], correct?

A. Correct.

Q. And by 2023 those sales had increased to [redacted], correct?

A. You are reading the numbers correctly.

Q. Would you agree, Ms. Doan, that the growth of CAB revenues from 2015 to 2023 from a little over [redacted] to a little over [redacted] is evidence of significant sales of these products?

A. Whether or not these are significant, this constitutes -- a significant sales increase relevant for commercial success would require comparing the sales to a relevant benchmark.

Q. I understand. But that's not my question. My question is, would you agree that the growth of sales revenues from a little over [redacted] in 2015 to a little over [redacted] in 2023 is a significant growth in sales revenues?

A. In a vacuum it's a significant growth in sales

revenues, but that is not the relevant question for a commercial-success inquiry.

Q. My question right now is focusing on profitability. So would you agree that the increase in sales from [redacted] in 2015 to [redacted] in 2023 would be evidence that CAB is profitable?

A. Absolutely not.

Q. Why would that not suggest to you that CAB's profitable by experiencing that kind of revenue growth over an eight-year period?

A. In order to evaluate profits, you need revenues minus costs. And there is no way in Appendix 2.2 I see costs. All I see is revenues. Therefore, I cannot conclude to anything relating to CAB profits looking at just sales revenues.

Q. So you believe that the assessment or evaluation of costs is necessary to evaluate commercial success as a secondary consideration of non-obviousness; is that correct?

A. It is necessary -- evaluating costs is necessary to the evaluation of profits in order to know whether these sales listed on Appendix 2.2 are made at a profit.

Q. Ms. Doan, are you aware of whether at the time that CAB introduced its aboveground messenger wire supported cable management system, that embodies the '291

1 patent, whether they were the only player -- entity -- who
2 was selling that kind of system?
3 A. I do not have independent knowledge of that
4 because I'm not an industry expert. I may have read
5 something along that line in the Smith declaration and
6 repeated in the Putnam declaration.
7 Q. And from your review of the materials in this
8 case, including those declarations that you've just
9 identified, do you have an understanding that the use of
10 CAB's aboveground messenger wire supported cable
11 management system became the predominant form of cable
12 management between the years of 2015 and 2023?
13 A. I have not seen any data relating to market
14 share or the number of projects using CAB products
15 relative to the number of projects using other substitute
16 in order to determine whether or not your proposition is
17 true.
18 Q. Are you aware -- aware that prior to CAB's cable
19 management system, the aboveground messenger wire
20 supported cable management system, that the other forms of
21 cable management consisted primarily of trenching and
22 cable trays?
23 A. I have seen that representation in Putnam and
24 Smith declarations.
25 Q. Are you aware that after CAB introduced its

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1 cable management system, that that system became the
2 predominant cable management system over trenching and
3 cable trays?
4 A. I recall in the Putnam deposition he said that
5 he doesn't have market-share data. And without market
6 share data, as an economist I cannot confirm or deny
7 whether CAB products are the predominant cable management
8 product in the market, as you -- as you state.
9 Q. Is it your opinion that market share data is a
10 prerequisite to establishing commercial success as
11 secondary consideration of non-obviousness?
12 A. It would be depend case by case.
13 Q. In this case is it your opinion that market
14 share data is a prerequisite to establishing commercial
15 success as a secondary consideration of non-obviousness?
16 A. Let me answer you like this. Even if you don't
17 have market-share data, you would still need some sort of
18 benchmark in order to assess whether the sales of the
19 patented product are significant or not relative to the
20 substitutes in the market. Usually we look at the company
21 internal documents. For example, you will look at CAB
22 market positioning documents, competitive positioning
23 documents and determine how CAB evaluate its sales
24 relative to benchmarks, and I haven't seen any such
25 documents cited in the Putnam declaration.

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Q. Have you seen testimony in this case from the materials that you have reviewed that CAB's aboveground messenger wire supported cable management system became the industry standard for cable management in utility-scale PV installations?

A. I have seen the words "industry standard" in the Smith -- represented in the Smith declaration and the Putnam declarations. However, I haven't seen any underlying data that shows CAB products -- that show whether or not CAB products are in the industry standards when you take into account all the substitutes available in the market.

Q. So if you assume, as I am asking you to assume, that once CAB introduced its system that it became the predominant form of cable management in utility-scale PV installations over prior methods that included trenching and cable trays, would you agree that that would be evidence of the commercial success of CAB's aboveground cable management system?

A. I would go back to my prior answer that commercial success is a holistic analysis. And I agree with Dr. Putnam that you cannot just look at the demand side; you need to also look at the supply side. So even if your assumption is taken on its face, you will still need to evaluate whether these sales are made at a profit

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in this case.

Q. So in this case, it's your opinion that you must determine whether CAB's sales from the 2015 to 2023 time period were made at a profit?

A. Yes. As Dr. Putnam sets forth the commercial success equation in his report to be including both the supply side and the demand side. That analysis -- that holistic analysis was not performed by Dr. Putnam.

Q. So short of that analysis -- well, strike that. I'll start at the end, what you said.

Is it your understanding or your testimony that Dr. Putnam did not perform any analysis or give any consideration as to whether CAB was profitable?

A. He made -- in his deposition he made assertions that CAB is profitable. He made assertions that CAB must be profitable, but there was no evidence relating to the cost and the profit information of CAB that he has provided in this case. As an economist, I don't speculate as to whether a company's profitable or not -- a product line is profitable or not. I look at financial statements and make that determination.

Q. Excuse me. I understand it is your opinion that you need to compare the sales of the product to an appropriate benchmark, correct?

A. Yes.

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Q. Assuming that you have an appropriate benchmark to compare those sales to, if there was an excess in sales of [redacted] the industry benchmark -- again, assuming that the industry benchmark was an appropriate benchmark -- would that be evidence to you of profitability?

A. No. Because there are many companies out there that have exponential sales growth but still operate at a loss. As economists we have to look at financial statements, we have to look at numbers -- costs data, revenue data -- and take all of that into consideration in determining whether they are profits or not.

Q. And in those circumstances where a company is experiencing exponential revenue growth but still operating at a loss, what typically accounts for that?

A. They could be reinvesting in their growth. There could be a number of reasons. I would have to look at it case by case.

Q. What other kinds of reasons might there be? Reinvestment in their growth. What else?

A. They could be providing excessive discounts. There could be other reasons. I just can't sit here and speculate as to a specific instance why there's significant growth but no profits. However, I would encourage you to refer to the Putnam deposition where he

gave an example of somebody selling cars at 100 percent growth rate every year for ten years. But that doesn't mean that those sales would be profitable.

Q. So in those instances where a company is experiencing exponential growth in its sales revenues but still not operating at a profit, some examples of potential reasons would be reinvestment in the company. If a company that was exploring -- experiencing exponential growth in sales revenues was not profitable for the reason it was reinvesting, would that exponential growth in sales revenue still not be an indicator of commercial success as a secondary consideration of non-obviousness, if the only reason they weren't profitable was because they were reinvesting?

A. That's a very myopic view of this. Because there may be -- like I mentioned, there may be multiple reasons why a company has exponential growth but are still not profitable. For example --

Q. If one of those instances was reinvestment in the company, correct?

A. Yes. But you don't want to just look at that reason. There could be that there's a lot of costs. There are high fixed costs so the company has to invest in a lot of infrastructure. There are a lot of general and administrative expenses to recover before it can achieve

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any profits. So there could be -- usually there's not one reason why profitability is not achieved. Usually it's a host of reasons. And in this case I just don't have any financial statement. I don't have any company document talking about profitability in order for me to assess whether or not there are profits and, if there're not profits, what are the reasons.

Q. If CAB's revenues of its commercial products -- strike that.

If CAB's revenues relating to the sale of its commercial products embodying the claimed inventions in these cases, if they experienced an exponential growth to the extent that those sales revenues exceeded an appropriate industry benchmark by [redacted], would that be evidence of commercial success even if CAB was not profitable?

A. No. Because, again, commercial success is a holistic analysis. And by just showing exponential sales, that is not sufficient to get to the commercial-success inquiry in this case.

Q. Well, I didn't just say exponential sales. I said exponential sales compared to an appropriate benchmark, where the exponential sales exceeded the appropriate benchmark by [redacted]. Would that not be evidence of commercial success even if they weren't

profitable?

A. That is still not sufficient. I'm evaluating Dr. Putnam declaration. And the Putnam declaration states that having significant sales or significant sales growth on the demand side is not sufficient for commercial success.

Q. So I'll ask you the question again. And this time I'll make clear, I'm not interested in Dr. Putnam's opinion. I'm asking you about your opinion.

And in your opinion, if it's the case that the exponential growth in CAB's sales revenues exceeded an appropriate benchmark by [redacted], would you consider that to be evidence of commercial success even if CAB wasn't profitable?

A. In my opinion, based on all the evidence I've reviewed in this case, the premise that you just stated is not sufficient for commercial success of CAB products.

Q. And why is that?

A. Because in this case I have seen no evidence -- even though I had heard assertions that CAB products are profitable, I have not seen any evidence specifically showing the profitability and the costs that go into making these products. And that is not to say that I entirely disagree with the premise relating to the benchmark in the assumption that you're asking me to make.

Q. So if I understood the last part of what you just said, you do not disagree with the premise?

A. No. I'm sorry. What I mean to say is you asked me to assume CAB's sales grow at [redacted] a benchmark that is appropriately defined. And what I'm trying to say in my prior answer is I disagree that the benchmark used in this case by Dr. Putnam was appropriately defined.

Q. I think we both know that wasn't my question. I think we both know that I asked you to make the assumption that it was an appropriate benchmark and that if you -- if CAB's sales revenues exceeded an appropriate benchmark by [redacted] whether in your opinion that would be evidence of commercial success even if CAB wasn't profitable.

A. I will repeat my answer that based on all the evidence I've seen in this case, assuming your assumption to be correct, that is not sufficient evidence to show that CAB products are commercially successful.

Q. And that's because you have not seen evidence of CAB's profitability; is that correct?

A. Correct. In addition to me disagreeing with the assumption that you asked me to make relating to the benchmark.

Q. Yes. I understand that you disagree that the benchmark that has been used in this case is not a proper benchmark. But aside from that, you disagree still that

that's enough evidence of commercial success because you haven't seen evidence of CAB's profitability?

A. Correct.

Q. Thank you.

Speaking of benchmark. Ms. Doan, if you would look please at Paragraph 10(a)(2) of your declaration. And I believe that the only difference between 10(a)(2) of your declaration in the '178 IPR and 10(a)(2) in your declaration of the '139 IPR is the '178 IPR refers to the '291 patent, and the '139 IPR refers to the '551 patent, correct?

A. Correct.

Q. Otherwise they're identical?

A. Yes.

Q. And I misspoke. I said "10(a)(2)." I actually wanted to direct your attention to 10(a)(3).

A. Got it.

Q. And there, those two subparagraphs are identical, correct, in each declaration?

A. Correct.

Q. It is your opinion that the benchmark that Dr. Putnam used -- i.e., net new photovoltaic capacity -- is an inappropriate benchmark for comparing to CAB's sales; is that correct?

A. Correct.

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1 Q. And you state in Paragraph 10(a)(3) that the
2 growth rate of photovoltaic PV capacity does not
3 accurately reflect the cable -- I'm sorry -- reflect the
4 market for cable management products. And the changes in
5 solar power plant design, such as the adoption of tracking
6 systems are not accounted for in his analysis, correct?
7 A. Yes.
8 Q. Paragraph 51 of your declaration -- which,
9 again, I believe is identical in both declarations -- you
10 indicate that the increased use of cables that resulted
11 from the shift to the use of trackers in utility-scale PV
12 installation could have been a reason why CAB's sales
13 exceeded the net new PV capacity benchmark that Dr. Putnam
14 utilized, correct?
15 A. Yes. I will also say in -- in this paragraph
16 citing to Mr. Bowman's deposition testimony that the use
17 of trackers require more space than fixed arrays and,
18 hence, requiring more cable management. And the use of
19 trackers is not reflected in Dr. Putnam's benchmark.
20 Q. So I think I understand you to be saying that
21 the increased use of trackers results in the need for more
22 cables and also more real estate?
23 A. It would be more real estate; hence, more
24 cables. I understand -- I understand from Mr. Bowman's
25 testimony to be saying that the increased use of tracker

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1 systems -- sorry -- trackers require more space and,
2 hence, require more cables management -- more cable
3 management.
4 Q. And what's your understanding of how the
5 increased use of space requires more cable management?
6 A. I can give you my -- my understanding based on
7 the Bowman testimony, but I wouldn't have specific
8 industry knowledge that I can apply to this.
9 So I understand what he's saying to be if
10 you have a megawatt of tracker systems, that sits on more
11 space, more land than a megawatt of fixed field systems;
12 and, hence, tracker systems require more cable management.
13 Q. And my question is, what's your understanding of
14 how that would require more cable management, if you have
15 an understanding?
16 A. I don't have an understanding beyond what I'm
17 citing to Mr. Bowman and also what I'm citing to Dr. Kern
18 for in this paragraph.
19 Q. In preparing this declaration, you refer on your
20 own to various resources and articles and data in the
21 solar industry to inform your decisions; is that
22 correct -- your opinions; is that correct?
23 A. Yes, as I saw appropriate.
24 Q. Did you ever check to see how the increased use
25 of trackers, how that would require more cable management

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1 just because the same megawatt-capacity system that uses
2 trackers would be on a bigger piece of real estate?
3 A. Yes. That's what Mr. Bowman testified to. And
4 we also have Dr. Kern stating in his declaration that
5 trackers resulted in increased use of cables and, hence,
6 require more cable management.
7 Q. And my question is, did you -- beyond that
8 testimony of Mr. Bowman or Dr. Kern, did you do any
9 research -- from the various resources that you researched
10 for your declaration, did you do anything to gain more of
11 an understanding as to why or how the use of trackers
12 would require more cable management?
13 A. All of my research and information is reflected
14 in the footnotes and the sentences as written in my
15 declaration.
16 Q. So based on those footnotes and sentences, do
17 you have an understanding as to whether the use of
18 trackers would require different kinds of cables than
19 systems that used fixed tilt?
20 A. I can only repeat to you what I'm writing here
21 from Dr. Kern declaration, that the use of trackers
22 required -- resulted in the increased use of AC cables to
23 power the device, as well as the increased use of signal
24 wiring or data wiring to monitor and communicate data
25 within the PV solar array.

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Q. That's the extent of your understanding as to how the increased use of trackers would result in more cable management; is that true?

A. Yes. In conjunction with Mr. Bowman's testimony we just discussed.

Q. So you state in Paragraph 51 of your declaration that this requirement -- increased requirement for cable management suggests to you a potential reason for why CAB sales could increase -- and for the record, I emphasize the word "potential," and I emphasize the word "could" -- at a faster rate than net new PV capacity, correct?

A. Correct. That's what I wrote.

Q. But you made no attempt to derive further understanding of what Mr. Bowman and Dr. Kern meant by those statements. And you made no further investigation to determine whether, in fact, increased cable management resulting from increased use of trackers was a reason why CAB's sales increased at a faster rate than new net PV capacity, correct?

MR. DIXON: Objection, form.

A. My --

MR. FLYNN: I'll withdraw the question.

THE WITNESS: When it comes to an appropriate time, can we take a break?

MR. FLYNN: Yes. I'm just going to ask you

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one more question and then we can take a break, just so I don't forget to ask this.

Q. (BY MR. FLYNN) And at the end of Paragraph 51 you state, ". . . Dr. Putnam did not consider this possibility in his report . . .," correct?

A. Correct.

Q. And, again, I emphasize for the record the word "possibility."

And so your opinion is that because Dr. Putnam did not consider this possibility, his analysis is flawed?

A. This is one of many reasons that Dr. Putnam did not -- this is one of many factors that Dr. Putnam did not consider. And he arrived at a very simplistic conclusion, that the entire difference between CAB's sales growth and the growth in his benchmark is due to the '291 and the '551. And there are a host of other reasons why such a discrepancy in growth could exist. And I'm pointing out here one reason that Dr. Putnam did not consider.

Q. Is it your opinion that Dr. Putnam was required to consider every possibility of what could have accounted for CAB's increased -- increased sales revenues and to discount that possibility?

A. I wouldn't say every possibility. But in his case, he went the extreme and he didn't consider any other

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reasons other than the '291 and the '551 being the driving force of the excess sales. And there are some very obvious factors indicated by the testimony and indicated by documents that could explain this disparity in growth rates that Dr. Putnam did not consider.

Q. If the increased use of trackers resulted -- again, hypothetically -- resulted in a 2 percent increase in cable management requirements over what they had been with fixed-tilt systems, in your opinion would that have been enough to account for CAB's sales revenues growth that exceeded net new PV capacity benchmark by [redacted]?

MR. DIXON: Objection, form.

A. I have not looked at that question specifically in terms of 2 percent versus some other percent. However, you appear to be -- here I'm talking about a totality of various reasons leading to there being a discrepancy in the growth rates between the benchmark and the CAB sales. And this is one of many reasons. I haven't looked specifically at what if there's this percentage, what would be the conclusion. I was not asked to evaluate that and I haven't done that.

Q. (BY MR. FLYNN) But in your view, based upon the testimony that you've read of Dr. Kern and Mr. Bowman, this is one of the obvious reasons that could account for that increased sales revenue growth, correct?

A. This is one of the potential reasons that could account for why CAB sales increased at a faster rate than the claimed benchmark of net new PV capacity.

Q. And I had asked you whether it was your opinion that this factor was one of the obvious reasons why sales -- CAB's sales revenues exceeded the net new PV capacity industry benchmark by more than [redacted]. And I believe that in your answer you said this is one of the potential reasons, correct?

A. Yes.

Q. So it's not one of the obvious reasons?

A. We are -- I may have used the word "obvious" previously, but I'm referring back to what I'm writing here in my declaration, that this is one of the potential reasons for why CAB sales could increase at a faster rate than net new PV capacity.

Q. I promise this is the last question, then we'll go for a break.

And I just wanted to make clear, the Paragraph 51 in your declaration that we've been referring to that is under the heading -- I think 6(a)(3), which is the section of your declaration in which you opine that the net new PV capacity is not an appropriate benchmark, correct?

A. Correct.

1 MR. FLYNN: Thank you.
2 THE WITNESS: Thank you.
3 (Recess from 11:07 a.m. to 11:27 a.m.)
4 Q. (BY MR. FLYNN) Ms. Doan, Paragraphs 10 --
5 strike that.
6 Ms. Doan, you also opined that net new PV
7 capacity is an inappropriate benchmark without evidence of
8 market share; is that correct?
9 A. Can you repeat your question.
10 Q. You also are of the opinion that the net new PV
11 capacity industry benchmark utilized by Dr. Putnam is
12 inappropriate, for the additional reason beyond what we've
13 already discussed, in the absence of any evidence of
14 market share or increased market share on the part of CAB;
15 is that correct?
16 A. So, first, there many reasons why net new PV
17 capacity is not appropriate, and we've only spoken about
18 one of the several reasons. Then, another consideration
19 is Dr. Putnam says in order to prove commercial success,
20 you should show that there is substantial sales in the
21 relevant market. And generally economists look at a
22 measure for market share in order to evaluate whether
23 there are substantial sales in the relevant market. I
24 make the observation here that why Dr. Putnam says market
25 share to be a relevant consideration, there was no

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1 discussion of market share in the Putnam declarations.
2 Q. You have identified additional reasons in your
3 declaration as to why you believe that the net new PV
4 capacity is not an appropriate benchmark. And I know we
5 haven't talked about all of them set forth in your
6 declaration so far. But can you tell me from your
7 declaration what other factors you are that -- that you
8 include in your declaration that we have not discussed to
9 support your opinion that the net new PV capacity is not
10 an appropriate benchmark?
11 A. Sure. Net new PV capacity is not an appropriate
12 benchmark for CAB's sales because it's an apple-to-oranges
13 comparison. When you compare CAB's sales to net new PV
14 capacity, it's an apple-to-oranges comparison because,
15 reason number one, there is a mismatch in the timing,
16 meaning that CAB's sales may occur before the net new PV
17 capacity is realized. The second reason why this is not
18 an apple-to-apple comparison is because of a mismatch in
19 geographic location. So net new PV capacity is a
20 U.S.-only measure as used in the Putnam declaration. And
21 CAB's sales, as used in the Putnam declaration, include
22 both U.S. sales and international sales.
23 Q. That was for the integrated grounding system,
24 correct?
25 A. I believe that all of the sales starting from

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20 -- starting from 2014 through 2023, the sales are used in Putnam declarations include international sales in addition to U.S. sales.

Q. You only include international sales in your declaration in the '139 IPR; you only include that section regarding international sales in that IPR -- in that declaration, correct?

A. Correct. But that reason would apply also to the benchmark being inappropriate as discussed in -- in my '139 -- in the '139 IPR. When I prepared my declaration in the 13 -- when I prepared my declaration in the '139 IPR, I re-read Putnam declaration and added that as a reason why the benchmark being inappropriate.

Q. Okay.

A. If I could go back to the apples-to-oranges comparison.

Q. So you've given me two additional reasons beyond what we've discussed so far. Go ahead.

A. Reason number three is that CAB products are also used to retrofit pre-existing PV solar plants. And in contrast, net new PV capacity is only for new solar plants. So that's another mismatch in terms of this comparison.

Reason number four is that the utility measure is in gigawatts. And it doesn't take into account

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the increase in prices of CAB products over time. So one reason that CAB sales revenue have experienced a growth rate, that is because of the increase in CAB prices, but the increase in prices is not captured in the net new PV capacity growth.

Q. You mean the increase in CAB's prices?

A. Yes.

Q. Okay.

A. And so those are four additional reasons, in addition to the increase in use of tracker systems that we have discussed.

Q. Thank you.

So for those four, plus the trackers reason that we discussed, that is why it is your -- that's what you rely upon to support your opinion that the net new PV capacity benchmark is not the appropriate industry benchmark in this case?

A. To compare against CAB sales in this case, correct.

Q. We talked a little bit already that you're aware, at least from what you reviewed and the evidence that you've considered or the materials that you've considered for your declaration, that at the time that CAB introduced its aboveground messenger wire supported cable management system, the other methods of cable management

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were primarily trenching and cable trays; is that correct?

A. Yes. I understand that from the representations in the Smith declaration and the Putnam declaration.

Q. And so those entities that were selling and using trenching and cable trays would have been competitors of CAB in the cable management market once CAB entered into the market, correct?

A. That's correct.

Q. You're also aware that at the time that -- strike that.

You're also aware that CAB first entered into the PV market, utility-scale PV installation market in the 2014, 2015 time frame, correct?

A. I recall from the Putnam declaration that CAB first introduced its aboveground cable management system in 2014.

Q. You had mentioned earlier today that you included in your exhibit the year 2014 sales that Dr. Putnam did not include. But those sales in 2014, they were nominal sales, correct?

A. Correct. As shown in Exhibit 2 to my declarations, CAB's sales in 2014 were [redacted].

Q. As compared to 2015, they were over [redacted], correct?

A. Yes. 2014 is likely a partial year.

Q. Did you review -- in any of the materials that you reviewed for your declaration, did you -- did you review information that indicated when CAB sold its first aboveground messenger wire supported cable management system? Excuse me.

A. I don't recall anything beyond the sales data and beyond the Putnam declaration and the Smith declaration.

Q. So we talked before that you're also aware of the -- from the information that you reviewed, that at the time CAB introduced its aboveground cable management systems -- system, CAB was the only one using that form of cable management, correct?

A. As represented by Dr. Putnam and Dr. Smith -- and Mr. Smith.

Q. So if CAB's competitors in the cable management market were employing trenching and cable trays, and now CAB comes in in the cable management market and begins selling the aboveground messenger wire and supported cable management systems, isn't that evidence that CAB's market share, by definition, was increasing in the cable management market?

A. I don't think I have enough information to answer your question because we would also need to look at was the market as a whole expanding; was -- what was the

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1 share of CAB versus other aboveground cable management
2 systems; when did they enter; what was the market share of
3 these other substitutes, like trenching, cable tray. I
4 haven't seen any data at all to be able to answer your
5 question.
6 Q. Well, you know that when CAB entered the market,
7 they had -- right before they entered the market they had
8 zero market share, correct?
9 A. Yes.
10 Q. You're aware that CAB was not engaged in any
11 form of cable management and did not sell any form of
12 cable management in utility-scale PV installations until
13 they entered the market with their aboveground messenger
14 wire supported cable management system, right?
15 A. Yes.
16 Q. So CAB's market share when they entered the
17 market was zero, right?
18 A. I would assume so.
19 Q. But the CAB competitors, who were employing and
20 selling trenching and cable trays, they had -- if they
21 were the only two forms -- other forms of cable
22 management, they would have had amongst them 100 percent
23 of the market share, correct?
24 A. Based on the representation that those were the
25 only other substitutes before CAB entered, yes.

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Q. So once CAB enters the market and starts selling its system, its market share is going from zero to some percentage that it didn't have before, correct?

A. I would assume so, based on the representation relating to CAB entering the market.

Q. And if the other competitors who had -- including competitors who had been employing trenching and cable tray, if some of the -- strike that. I didn't ask that the way I wanted it.

If other competitors, including competitors who, for example, were selling cable trays as a form of aboveground cable management and then subsequently themselves began to use an aboveground messenger wire supported cable management system like CAB's, that would be further information relevant for your consideration and analysis of CAB's increase in the market share; would it not?

A. Can someone just re-read to me the question, please?

Q. I can do better than that. I'm sure I can ask it better than I just asked it. I got lost in my own question.

If we start with the premise that before CAB entered the market, 100 percent of the market share was among those competitors of CAB who employed and sold other

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1 forms of cable management, like trenching and cable
2 trays --
3 A. Okay.
4 Q. -- and then when CAB enters the market and it
5 begins selling its system, it is now taking a portion of
6 that market share that it did not have before, correct?
7 A. Correct.
8 Q. And if it's taking a portion of the market share
9 that it didn't have before, then, by definition, the
10 trenchers and cable trayers, who had 100 percent of the
11 market, are losing market share, correct?
12 A. Correct.
13 Q. So under that scenario, CAB is increasing its
14 market share?
15 A. From zero percent to some positive number.
16 Q. Yes? Correct?
17 A. Correct.
18 Q. Are you aware from any of the materials that you
19 reviewed in preparing your declaration that there was at
20 least one tracker developer and manufacturer that designed
21 its tracker to be compatible with CAB system?
22 A. I'm not aware of the information.
23 Q. Do you recall reviewing that testimony from
24 Mr. Bowman's declaration?
25 A. I don't recall, sitting here.

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Q. That doesn't sound familiar to you?
A. Not as I sit here.
Q. Okay. If that was the case, as Mr. Bowman testified in his declaration, that one of the tracker developers and manufacturers started designing its tracker to be compatible with CAB's system, would that be further evidence to you that CAB's system was becoming widely accepted and adopted?
MR. DIXON: Objection, form.
A. That is not sufficient evidence to get to that conclusion. One example is not sufficient evidence to conclude to market-wide adoption.
Q. (BY MR. FLYNN) You would need other evidence as to whether or not CAB's aboveground cable management system is becoming -- the term that we used previously -- the "industry standard"?
A. Correct.
Q. And you don't recall reviewing any evidence in the materials that you reviewed to indicate that CAB's aboveground cable management system had become the industry standard in terms of cable management and utility-scale PV installations?
A. I recall only statements, as I mentioned, made in the Putnam declaration and the Smith declaration and potentially other places. But I don't recall seeing

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1 market-share data -- seeing market-share data or the
2 portion of projects using CAB products versus the portion
3 of projects using other substitutes in the market in order
4 to substantiate that assertion.
5 Q. Do you have any doubt to -- I'm sorry. Do you
6 have any reason to doubt testimony of people in the
7 utility-scale PV industry if they stated that CAB's
8 aboveground cable management system had become the
9 industry standard?
10 MR. DIXON: Objection, form.
11 A. I'm not an industry expert, so I'm not in a
12 position to confirm or deny their statements.
13 Q. (BY MR. FLYNN) With respect to CAB's integrated
14 grounding system, you're aware that they introduced that
15 in the 2018 time frame, correct?
16 A. I believe that's what Dr. Putnam said. I recall
17 seeing in the sales data -- I recall seeing somewhere else
18 a mention of December 2017.
19 Q. Are you aware of whether the first sales of
20 CAB's integrated grounding the system -- the first
21 significant sales occurred in 2018 from the data that you
22 reviewed?
23 A. As I stated before, the data doesn't say
24 "integrated system"; neither does it say "standard
25 system." Dr. Putnam stated, as well as the Smith

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1 declaration and other declarants stated, that CAB began
2 selling its integrated system in either 2018 or December
3 2017.
4 Q. And you're also, then, aware from the materials
5 that we reviewed that they've also testified that prior to
6 that time, there was nobody else that was employing an
7 integrated grounding system like CAB's that used a
8 messenger wire as a support structure to support cable
9 hangers and current wires at the same time that it was
10 acting as an equipment grounding conductor; is that
11 correct?
12 A. I recall those representations in Putnam and
13 Smith declarations.
14 Q. In fact, in Paragraph 28 of your declaration,
15 which I believe is the same in both declarations --
16 A. Correct.
17 Q. -- you describe both CAB's standard system and
18 integrated grounding system, right?
19 A. Correct.
20 (Discussion off the record.)
21 (Requested portion was read.)
22 Q. (BY MR. FLYNN) And so you're aware from the
23 materials that you've reviewed as well that before CAB
24 introduced its integrated grounding system, there was no
25 one else employing a grounding system that used a

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1 messenger wire as both a support structure and an
2 equipment grounding conductor, as you understand it and
3 set forth in your declaration, correct?
4 MR. DIXON: Objection, form.
5 A. I recall that representation in the Putnam
6 declaration and the Smith declaration.
7 Q. (BY MR. FLYNN) You also recall information from
8 the information that you reviewed that once CAB
9 implemented its integrated grounding system, that it too
10 began to be used and widely adopted in the industry for
11 grounding systems?
12 A. My same prior answer applies. In order -- I
13 haven't seen data that shows wide adoption of the
14 integrated system nor the standard system of CAB. I may
15 have seen those representations made in the Putnam
16 declaration, the Smith declaration, and other declarants
17 for CAB.
18 Q. So you've -- you've seen their -- their
19 testimony, their assertions, but you just haven't seen any
20 data to back that up?
21 A. No market-share data, no portion of projects
22 data, or other types of data relating to the share of CAB
23 sales versus substitute products sales.
24 Q. But, again, if CAB was not in the market until
25 it introduced its integrated grounding system and then

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1 began to experience significant sales growth relating to
2 its integrated grounding system, that would tell you, by
3 definition, it was increasing its market share in that
4 market; would it not?
5 THE WITNESS: Can you please repeat his
6 question to me.
7 (Requested portion was read.)
8 A. You're asking a rather complex question to
9 answer. There is some sort of cannibalization between the
10 standard system sales and the integrated system sales, as
11 discussed in the Putnam declarations. So to know whether
12 CAB market share was increasing or not in 2018 and after,
13 I would need data relating to the sales -- the sales in
14 the market and the sales of other substitute options in
15 order to be able to confirm or deny your question.
16 Q. (BY MR. FLYNN) Did I hear you to say that
17 because there is some cannibalization of the standard
18 system in the integrated grounding system?
19 A. Yes. The Putnam declarations doesn't use the
20 word "cannibalization," but he describe it as certain
21 customers that would have purchased the standard system
22 now go purchase the integrated system after the integrated
23 system was introduced. That's what -- that's what his
24 statement was.
25 Q. And you also understand that the integrated

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1 grounding system is still practicing the -- strike that.
2 You understand that the integrated
3 grounding system that uses the messenger wire as both the
4 support structure for cable hangers and current wires, and
5 acts as an equipment grounding conductor, also has the
6 same features and advantages of the standard system just
7 without the messenger wire that has dual capacity; is that
8 right?
9 A. As an economist, I don't have any understanding
10 or opinion relating to that. As I stated, I know that
11 Dr. Putnam contends based on his reliance on CAB's
12 technical experts that the integrated system practices
13 both the '291 and the '551 patent.
14 I would also note that I went to the Phinney
15 declaration and the Kern declaration. I did not see any
16 discussion in those declarations relating to the
17 integrated system practicing the '291 patent. However,
18 because I'm evaluating Dr. Putnam declarations, I accepted
19 as an assumption that the integrated system practices both
20 the '291 and the '551 patents.
21 Q. Thank you.
22 Now, Ms. Doan, you are -- strike that.
23 You recall that Dr. Putnam in his analysis
24 and description of the net new PV capacity benchmark were
25 using that benchmark -- no, that's not right -- strike

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that.

You recall that Dr. Putnam indicated that the net new PV capacity grew from 24.2 percent per year -- grew 24.2 percent per year from 2015 to 2023, correct? And I would you refer to Paragraph 35 of your declaration.

A. Correct. That is Dr. Putnam's declaration.

Q. Yes. In Figure 2 of Dr. Putnam's declaration at Paragraph 47 of his declaration.

A. I am -- I am at Figure 2 of Putnam declaration.

Q. And with Figure 2, Dr. Putnam is also stating that CAB's sales revenues over that same period of time exceeds the net new PV capacity by a factor of [redacted], correct -- no, I take that back. I misread my own note. Wrong question.

Doctor -- in Paragraph 47 of Dr. Putnam's declaration, with the use of Figure 2, he's indicating that the 24.2 percent industry growth from 2015 to 2023 is a growth rate factor of 6X, correct?

A. I don't think you read Dr. Putnam declarations correctly. Dr. Putnam represented in his Figure 2 that CAB sales that -- that net new utility-scale PV capacity -- apologies.

THE WITNESS: Maybe I misheard his question. Can I please re-hear his question again?

Q. (BY MR. FLYNN) I'll just ask it again. In

1 Paragraph 47 of Dr. Putnam's declaration, he indicates
2 that industry capacity grew at a rate of 24.2 percent per
3 year from 2015 to 2023, correct?
4 A. Yes. Using Dr. Putnam's benchmark, which I
5 disagree with, that's what Dr. Putnam's calculation used.
6 Q. Yes. Well, you don't have any reason to
7 disagree -- whether you think that the net new PV capacity
8 benchmark is the wrong benchmark, you don't have any
9 reason to disagree that using that benchmark, the industry
10 growth from 2015 to 2023 occurred at 24.2 percent per
11 year, do you?
12 A. Putnam's math is correct --
13 Q. Okay.
14 A. -- using that benchmark.
15 Q. And, then, referring to Figure 2, Dr. Putnam
16 indicates that from that 2015 to 2023 period, the industry
17 benchmark -- or the industry grew at a 6X growth rate
18 factor, correct?
19 A. Using Dr. Putnam's benchmark, that's what
20 Dr. Putnam indicated.
21 Q. Yes. One of the things that we talked about as
22 to why you think net new PV capacity is the wrong
23 benchmark is because of the increased use of trackers that
24 required additional cable management, correct?
25 A. Correct. And the industry benchmark that

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1 Dr. Putnam used does not incorporate the increasing use of
2 trackers.
3 Q. Yes. So that's what -- for that reason, that's
4 what you're saying is the reason why the benchmark is the
5 wrong benchmark, because Dr. Putnam is not taking into
6 account the increased cable management needs resulting
7 from the increased use of trackers, right?
8 A. Yes. Alternatively stated, there are
9 compounding factors that are impacting CAB's sales but are
10 not reflected in the benchmark he's using.
11 Q. At the time that CAB entered the market in
12 2015 -- or in 2015, which was the first year that CAB made
13 any substantial sales of its aboveground cable management
14 system, trackers were already dominating over fixed-tilt
15 systems at that time; were they not?
16 A. Let's refer to some specific data. In
17 Exhibit 6.2 to my '178 declarations -- and it's -- I have
18 that same exhibit in the '178.
19 Q. You said 6.2, correct?
20 A. Yes. Exhibit 6.2 in my '178 declaration shows
21 the portion of net new PV capacity that is comprised of
22 tracking system versus fixed-tilt systems between 2010 and
23 2023. In 2015 tracking system comprised about 70 percent
24 of net new PV capacity; and by 2023, tracking systems
25 comprised about 96 percent of net new PV capacity.

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Q. So in 2015 tracker systems were already accounting for 70 percent of net new capacity, correct?

A. Correct.

Q. And by 2016 trackers were -- tracker systems were accounting for 80 percent of net new capacity?

A. That is correct.

Q. So in 2015 when trackers were accounting for 70 percent of net new capacity, trackers were already dominating over fixed-tilt systems with respect to generation of new capacity, correct?

A. Correct. But the important point to note here is that over the time period that Dr. Putnam does his comparison, from 2015 to 2023, there was an increasing use of tracker systems with tracker system proportioned out of net new PV capacity growing to 95 percent by 2023.

Q. So let's just look at your Figure 6.2, then, in a little bit more detail. So it was at 70 percent -- tracker systems at 70 percent in 2015, right?

A. Correct.

Q. They were at 80 percent in 2016, right?

A. Correct.

Q. They dropped 1.7 percent in 2017?

A. Correct.

Q. They dropped from there 10.4 percent in 2018, correct?

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A. Correct.
Q. And then they rose again from 2018 to 2019, 19 percent?
A. Correct.
Q. They increased 3.6 percent from 2019 to 2020, right?
A. That's correct.
Q. They dropped almost a percent in 2021 -- from 2020 to 2021, right?
A. Correct.
Q. And they increased 3.6 percent from 2021 to 2022?
A. Correct.
Q. And increased 2.5 percent from 2022 to 2023?
A. Correct.
Q. So overall, from 2015 to 2023 it went from 70 percent to 96 percent?
A. Correct.
Q. So that's -- would be an increase in percentage of 26 percent with respect to tracker system generating new capacity?
A. Correct. With respect to the proportion of net new PV capacity that is comprised of tracker systems.
Q. So Exhibit 2 of your declaration -- in which you set forth CAB's sales revenues that were included in

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Dr. Putnam's calculations, right?

A. Correct.

Q. In 2015 CAB's sales revenues were [redacted]; and in 2016 they increased to [redacted], right?

A. Correct.

Q. And that would be an increase of about [redacted] in revenues from 2015 to 2016?

A. I would assume that your math is right, though I haven't done that math myself. But it looks to be right.

MR. FLYNN: Off the record.

(Discussion off the record.)

Q. (BY MR. FLYNN) And from 2016 to 2017 -- well, first of all, that's [redacted] in CAB's revenues from 2015 to 2016 compares to a 10 percent -- 10.2 percent percentage increase in the use of trackers to generate new capacity as shown in Exhibit 6.2, right?

A. If you are just stating the growth rate in tracker systems between 2015 and 2016 in Exhibit 6.2, and CAB's sales growth in Exhibit 2, your math looks approximately correct, though I haven't done that specific math myself.

Q. In Exhibit 6.2 -- in the second line of Exhibit 6.2, you identify the amount of megawatts generated by trackers in 2015 -- I'm focusing on 2015 -- correct?

A. Correct.

Q. And for 2015 that was 2,011 megawatts of new capacity generated by trackers?

A. Correct.

Q. And by 2023, the amount of megawatts and new capacity generated by trackers was 17,213 megawatts, correct?

A. Correct.

Q. That would be a factor of about 8.6X from 2015 to 2023, correct?

A. Correct.

Q. Dr. Putnam's calculations, which you incorporated into your declaration, of CAB's sales revenues from 2015 to 2023 was a growth factor of [redacted], right? Again, I can refer you to Paragraph 47 and Figure 2 of Dr. Putnam's declaration.

A. Correct.

Q. So -- strike that.

So one of the other four factors that you mentioned to me -- four reasons that you mentioned to me, that you -- that support your opinion that net new PV capacity is an inappropriate benchmark is that the time it took for installations -- utility-scale PV installations to be completed compared to when CAB was getting paid for its sales, correct?

A. Correct.

Q. So for example -- just to make sure I understand your analysis. For example, if there was an order placed with CAB in 2017 and CAB got paid in 2017 but the installation wasn't completed until 2018, it would not have been until 2018 that the new PV capacity would come online and be factored in, correct?

A. Correct. And just to clarify some more. So in your example, Dr. Putnam would be comparing CAB's sales in 2017 to net new PV capacity in 2017; but there's a mismatch in timing because the net new PV capacity that correspond to that sale doesn't occur until 2018, for example.

Q. So CAB's 2017 sales is only being compared to net new capacity as of 2017, whereas the net new capacity resulting from this project that wasn't finished until 2018 doesn't get considered until 2018, right?

A. Correct.

Q. Doesn't that even out over time?

A. I have no reason to believe that it evens out. He hasn't shown any math to show that it evens out.

Q. So if in this scenario that we just talked about, if the net new capacity doesn't come online until 2018, but CAB's sales have already been shown for 2017, then there's going to be an increase in net new capacity

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in 2018 that won't account for the sales that have already been realized by CAB in 2017, right?

THE WITNESS: Can you re-read for me his question, please.

(Requested portion was read.)

A. So that -- so that -- if I understand your question, that's the point I'm trying to make is that the 2018 capacity is not corresponding to the sales made by CAB in 2018. There is some portion of that capacity that correspond to sales made by CAB in prior years.

Q. (BY MR. FLYNN) I understand that that's your point. My question is, when that occurs year over year, would you expect that to have any significant impact on the comparison of CAB's revenues to net new PV capacity over an eight-year period?

A. That mismatch in timing certainly has an impact. We don't know what the amount of the impact is, whether it's significant or not, or without knowing the specific timing of the sales and the specific timing of various projects, which Dr. Putnam did not evaluate; and, hence, I did not evaluate that question.

Q. But just to be clear that we're on the same page with this example. If CAB makes sales in 2017 and receives its revenues in 2017 for a project that isn't complete until 2018 -- so CAB's sales in 2017 is going to

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be compared to net new PV capacity in 2017 that has not yet realized the net new capacity from the project that's already been paid for, correct?

A. Yes.

Q. And so you would say that CAB's -- comparing CAB's revenues in 2017 to net new PV capacity in 2017 might give you an exaggerated view of CAB's revenues because it's not taking into account all the net new PV capacity that CAB's revenues is related to, right?

A. Because of this mismatch in timing, you are not doing an accurate comparison. I haven't evaluated whether that's exaggerating CAB's sales, that's understating CAB's sales. There is -- when you do a comparison of A to B, you want to make sure the A and B are consistent with each other in terms of timing, geographic locations, type of market, and other factors. And there are multiple dimensions here where the sales of CAB and the benchmark, they're not apples to apples. And this cumulative -- the cumulative impact of all these mismatches result in an unreliable benchmark.

Q. But in 2017 CAB's revenues are being compared to 2017 net new capacity, right?

A. Correct.

Q. And it doesn't include the net new capacity resulting from that project for which it got paid in 2017

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1 because that project wasn't completed until 2018, right?
2 A. Correct.
3 Q. But wouldn't you also assume that in 2017, CAB's
4 sales revenues are being compared to net new capacity that
5 includes net new capacity that's being realized from, say,
6 a project in -- that started in 2016 and wasn't completed
7 until 2017?
8 A. It's possible. We just don't know.
9 Q. So in order to -- in your view, to make this an
10 apple-to-apple comparison, you'd have to figure out -- you
11 know what CAB's revenues are in 2017, and you'd have to go
12 back and figure out for every project relate -- that
13 relates to those revenues, you have to figure out when it
14 started and when it was completed. Is that your opinion?
15 A. In my opinion, you shouldn't use net new PV
16 capacity in the first place. So I haven't put myself in
17 the position of saying, "Oh, I have to use net new PV
18 capacity; what would I do then?" I haven't gone to that
19 next step because to me the first step is telling me no,
20 don't use -- not to use PV capacity as a benchmark.
21 Q. So if you don't use net new PV capacity, I
22 assume you would also believe that new gross capacity
23 would be an improper benchmark for the same kinds of
24 reasons, correct?
25 A. You are saying new gross capacity?

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Q. Gross -- instead of net new PV capacity, just gross increase in PV capacity from year to year. That would also be an inappropriate benchmark in your view, correct?

A. I believe Dr. Putnam himself is saying that.

Q. I'm asking you, whether you believe.

A. So there would -- I believe based on my evaluation and my declaration that it's not appropriate to use PV capacity, whether it's net new or whether it's PV capacity in absolute terms, to compare CAB's sales because the PV capacity -- the general measure of PV capacity, whether it's net new or gross capacity, does not accurately reflect the market for CAB products, for the reasons that I outlined.

Q. You're referring back to you need to have market-share data, correct?

A. You need to have -- if not market-share data, you need to have an appropriately defined benchmark that looks at CAB's competitor products -- competing products, how CAB performs relative to its competitors. You need to review CAB internal documents on competition, on benchmarking performance, and go from there in determining the appropriate benchmark. But Dr. Putnam hasn't cited to any such CAB internal documents or data that shows market-share information; proportion of projects, for

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1 example.
2 Q. So when you refer to you need to look at their
3 internal documents to measure benchmarking performance,
4 what's the benchmark that you're referring to?
5 A. Dr. Putnam hasn't --
6 Q. I'm asking you. What's the benchmark that
7 you're referring to?
8 A. I have to look at the documents itself. For --
9 usually -- any original company usually has internal
10 documents that talks about how it performs relative to
11 competitors. That is commonly seen in my profession.
12 Just internal company documents talking about competitive
13 positioning. And as economists we tend to use those
14 internal documents in formulating a benchmark. And
15 Dr. Putnam in this case doesn't even mention, doesn't even
16 consider any such documents as a beginning point to think
17 of a benchmark.
18 Q. Do you believe that there's any industry
19 benchmark that would be appropriate to use in this
20 analysis to compare CAB's sales revenues to?
21 A. My assignment is to evaluate Dr. Putnam's
22 declarations. I was not asked to affirmatively evaluate a
23 benchmark or evaluate whether -- I wasn't asked to do an
24 affirmative analysis as to whether CAB products achieve
25 commercial success relative to a benchmark.

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Q. You just know that net new PV capacity isn't the right benchmark, right?

A. For all the reasons discussed in my report -- in my declarations, that is my opinion.

Q. And what you just said a minute ago is because you don't have any internal CAB documents to consider, as an economist would usually consider, correct?

MR. DIXON: Objection, form.

A. In addition to all the reasons that I outlined as to why the benchmark used by Dr. Putnam is an appropriate benchmark.

Q. (BY MR. FLYNN) One of the other reasons that you identified for me a little bit ago as to why net new PV capacity is not an appropriate benchmark is because there's evidence that CAB sold products to retrofit existing projects, correct?

A. Correct.

Q. And you talk about that in Paragraph 54 of your declaration?

A. Correct.

Q. You refer in Paragraph 54 of your declaration to the -- strike that.

You refer in Paragraph 54 of your declaration to the project named "CA Flats," correct?

A. I do refer to project CA Flats in making the --

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1 the argument that CAB's sales were not realized in the
2 same year as the year that the net new PV capacity was
3 recognized.
4 Q. Right. That supports your position on the --
5 the lead times of these projects, right?
6 A. Correct.
7 Q. So thank you for that correction. And it
8 reminded me that I actually wanted to ask you . . .
9 So are you aware from any information that
10 you reviewed of any other project like CA Flats where
11 there was such a lag time between commencement and
12 completion of the project?
13 A. I saw it lists one or two other projects in
14 CAB's sales data and I did research relating to those
15 projects. I don't recall the name of the project as I sit
16 here, but we also have Brooks deposition, for example,
17 cited in Footnote 154 of my '291 patent -- '291 patent
18 declaration talking about an 18-month lead time. And we
19 have Dr. Putnam testimony also I believe relating to the
20 lead times cited in Footnote 153 of my declaration.
21 Q. With respect to the retrofitting issue, you
22 refer in Footnote 156 to the Topaz General project, right?
23 A. Correct.
24 Q. And the information that you're basing your
25 opinions on with respect to the retrofitting issue and

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1 particularly relating to the Topaz project and its date of
2 completion is based on a press release; is that right?
3 A. Correct.
4 Q. Other than what you reviewed in the press
5 release, did you do any other -- make any other attempt to
6 verify the information that was in the press release?
7 A. I assume your question relates to the Topaz
8 solar farm.
9 Q. Correct.
10 A. I do not recall looking at any other source
11 relating to the completion of the Topaz project beyond the
12 citation in Footnote 156.
13 Q. And the only source that's included in that
14 citation is a press release, correct?
15 A. For the Topaz farm, correct.
16 Q. Yes. And that's the only example that you're
17 giving of a -- of the example of where CAB's products were
18 used to retrofit an existing installation?
19 A. Correct. I already gave this one example
20 because -- also because CAB did not provide its sales data
21 by project for other years. It only provided its sales
22 data by project for 2018. So for 2018 I did not take an
23 exhaustive look at all of CAB projects. I looked at a
24 number of projects and I found Topaz project as one
25 example relating to a retrofit installation.

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Q. Well, did you find any other examples that you didn't include in Footnote 156?

A. I don't recall another example. I also did not look exhaustively at all the projects in 2018 because I also have Dr. Putnam's testimony where Dr. Putnam acknowledges that CAB products are used for retrofitting, whereas the net new PV capacity does not include PV capacity of retrofit projects. I have Dr. Putnam acknowledging that fact to be true.

Q. Is it fair to say that if you were aware of any other projects, you would have included those projects in Footnote 156?

A. Yes. If CAB had given sales data for other years by project, I likely would be including more examples.

Q. But you didn't get the -- identity of the Topaz project as an example of retrofitting from CAB's sales data, did you?

A. CAB's sales data for 2018 only is by project. So for 2018 only you can see the project name associated with each orders. And that allowed me to do general research relating to when the project was completed.

Q. When you refer in Paragraph 54 to 2018 project-level sales data, you're referring to Exhibit 2056; is that right?

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A. Correct.

Q. And you're referring to Exhibit 2056 for both the lead-time example and retrofitting examples, correct?

A. Correct. In addition to the testimony of the declarants noted on page 33 of my declaration for the '291 patent.

Q. You're aware that the sales figures that Dr. Putnam utilized in performing his analysis of CAB's sales data did not come from Exhibit 2056, right?

A. It did not come from Exhibit 2056. But it's -- for 2018 it's very close to the sales figure in Exhibit 2056. 2018 is the only year for which CAB provided sales data by project and this data in Exhibit 2056 is also referenced in the Putnam declaration.

Q. But my question was, you're aware that the sales data that Dr. Putnam utilized for performing his analysis of CAB's sales data was not taken from Exhibit 2056 but Exhibit 2046, correct?

A. If you are talking about the sales data used in his comparison to his benchmark, then, that's correct.

Q. So there's no indication in Exhibit 2046 that he included any sales data from 2056 specifically relating to Topaz, is there?

A. Exhibit 2046 and Exhibit 2056 use almost identical sales for 2018. And Dr. Putnam himself relied

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on Exhibit 2056, and he described sales of CAB in 2018 in his declarations. And I can point you to those pages if you would like.

Q. Did Dr. Putnam rely on specific sales information from 2018 in performing his analysis of CAB's sales data as he did in Exhibit 2046?

THE WITNESS: Can you repeat the question.

(Requested portion was read.)

A. Exhibit 2046 included CAB's sales data in 2018. It's just not by project. And Exhibit 2056 you can see that. You can think of Exhibit 2056 as taking the 2018 data and give you a project-level view of the 2018 sales, but it's the same.

Q. (BY MR. FLYNN) How do you know that? How do you know that? Dr. Putnam specifically said that he relied on the information provided to him by CAB that he set forth in Exhibit 2046. And that's the information that he relied upon to do his sales analysis. So on what basis do you make the statement that you can see that what he did was to take the sales date from 2056 and put it into Exhibit 2046?

MR. DIXON: Objection, form.

A. That's not what I said. He used Exhibit 2046 for his quantification of CAB's sales. And this Exhibit 2056, which is only for 2018 -- and it's by

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1 project -- if you sum up all the sales in Exhibit 2056 for
2 2018, you will get a very similar number to the total CAB
3 sales in Exhibit 2046. And Dr. Putnam himself relied on
4 Exhibit 2056 for 2018 when he spoke about integrated sales
5 versus standard system sales. I can point you to the
6 pages in Putnam declaration where he used Exhibit 2056.
7 Q. (BY MR. FLYNN) Please do.
8 A. If you look at Putnam declaration in the '178
9 IPR and you look at Paragraph 61, then, Paragraph 61 also
10 refers to Footnote 47, Exhibit 2056.
11 Q. You're aware that Exhibit 2056 is color-coded,
12 correct?
13 A. Correct.
14 Q. You're aware that the purpose for using
15 Exhibit 2056 was to identify the point in 2018 where
16 integrated -- the sales of the integrated grounding system
17 was becoming predominant over the sales of the standard
18 system, that that's when that transition was occurring,
19 correct?
20 A. I recall Dr. Putnam testifying in his deposition
21 that he received this data with the color coding to
22 represent standard system versus integrated system sales
23 of CAB.
24 Q. In terms --
25 A. For 2018.

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Q. Yes. And so you recall that what's color-coded -- I think it's orange or red or whatever that is -- that that's representing the integrated grounding system sales, correct?

A. Dr. Putnam I believe testified that the orange color code -- the orange rows represent CAB's representation of standard system sales in Exhibit 2056. And the blue rows represent integrated system sales in 2018. I recall that to be Dr. Putnam's representations relating to this data.

Q. Regardless if you're correct or if you've gotten those colors mixed up, the idea of the color-coded Exhibit 2056 was to compare the extent of the integrated grounding system sales in 2018 to the standard system sales, correct?

A. That appears to be the purpose for which Dr. Putnam used Exhibit 2056.

Q. By virtue of its color coding, right?

A. I would assume so.

Q. In Paragraph 61 of Dr. Putnam's declaration that you pointed me to, is it your understanding that those particular sales numbers were derived from Exhibit 2056 as opposed to Exhibit 2046?

A. Correct. My understanding is that for paragraph -- for the numbers in Paragraph 61, Dr. Putnam

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was using Exhibit 2056.

Q. Did you compare the sales figures for 2018 as set forth in Exhibit 2056 with the sales figures for 2018 as set forth in Exhibit 2046?

A. I did.

Q. And did you -- and did you find that they matched?

A. They very closely matched. That is -- that comparison is in Footnote 160 of my '551 patent declaration. In Footnote 160 I stated that CAB's sales in 2018, project-level sales data in Exhibit 2056 was [redacted]; and CAB's sales data in Exhibit 2046 for 2018 was [redacted].

Q. From any of the research that you've done into the solar industry, are you aware of the frequency with which existing projects are retrofitted with any components of the utility-scale PV installation?

A. I haven't seen that data specifically.

Q. In Exhibit 2056, referring to the Topaz project -- page 1 of 2056 identifies the Topaz project about halfway down the first page, correct?

A. Correct.

Q. Okay. And there are two line items for "Topaz General," right?

A. That is correct, on the first page.

Q. Yes. And the first line item on the first page is for -- or includes rings, right?

A. I see that it says "rings," yes.

Q. In the amount of [redacted], correct?

A. Correct.

Q. On page 5 of Exhibit 2056.

A. Page 5. Okay.

Q. About three-quarters of the way down the page, there's another reference to Topaz General and also includes for rings, right?

A. Correct.

Q. And, again, that's for [redacted]?

A. That is right.

Q. You understand that Dr. Putnam excluded any sales of rings from his analysis; are you not?

A. Yes, I'm aware. That's correct.

Q. So with respect to the Topaz project, you're relying on Exhibit 28 to identify an example of retrofitting where CAB's products were used to retrofit an existing project, right?

MR. DIXON: Objection, form.

A. You mentioned Exhibit 28?

Q. (BY MR. FLYNN) I did. Let me -- let me do that again.

So you're using -- I'm sorry.

Exhibit 2056 that you are relying on to have identified the Topaz project as an example where CAB's products were used to retrofit an existing installation --

A. Correct.

Q. -- that that exhibit includes [redacted] of rings?

A. From those two line items --

Q. Yes.

A. -- that you pointed out. I don't know if there are other line items for rings.

Q. But of those rings, [redacted] worth of rings, correct?

A. Correct.

Q. Which Dr. Putnam excluded from his analysis?

A. Correct. But Dr. Putnam did not exclude other Topaz line items in here that are not rings. For example, there's a messenger wire that Topaz -- that was purchased by the Topaz project on page 4 of Exhibit 2056. There was a pier bracket that was purchased for the Topaz project on Exhibit 1 of page 2056 and Dr. Putnam nevertheless included -- included those sales.

Q. And how much did those sales add up to?

A. I'll need to do some math. And I'll need to find all the line items and . . .

Q. How about [redacted]? Line item I believe that you're referring to is on page 1, I think you said, right?

Topaz General refers to pier brackets, correct?

A. Correct.

Q. And that's for [redacted], right?

A. Correct.

Q. And on page -- I think you said 4 --

A. Yes.

Q. -- there's a Topaz General for messenger wire for [redacted], correct?

A. Correct.

Q. There are actually two of those, so that would be [redacted], correct?

A. It looks like you summed up those line items correctly.

Q. So the messenger wire and the pier brackets together amount to less than the -- the amount of rings which Dr. Putnam expressly excluded from his analysis, right?

A. For those specific three line items for Topaz. And Topaz is just one example of CAB products being used to retrofit. I don't have access to other data by project for other years outside of 2018 to determine the extent to which Dr. Putnam input sales from retrofit installations.

Q. So that's just another possible explanation for why CAB's revenue sales could have grown at a rate that so far exceeds the net new PV capacity benchmark, correct?

1 MR. DIXON: Objection, form.
2 A. Yes. It's not another explanation for which
3 Dr. Putnam hasn't accounted for.
4 Q. (BY MR. FLYNN) Another of the reasons that you
5 identified for me was the -- as to why the net new PV
6 capacity benchmark is inappropriate is because he didn't
7 take into account increases in CAB prices over time; is
8 that right?
9 A. Correct. And that increase in CAB prices is not
10 reflected in the net new PV capacity; yet it's reflected
11 in CAB's sales trends.
12 Q. I confess I'm having a little difficulty
13 understanding this reason. If CAB is increasing its
14 prices, and the customers are paying those prices --
15 willing to pay those prices, I think that would be -- that
16 would be -- relate to the supply demand -- the supply side
17 and demand side, right?
18 A. Yes.
19 Q. Even if CAB is increasing its prices and the
20 customers are willing to pay it, isn't that evidence of
21 CAB's commercial success relating to its products?
22 A. We have -- you are taking my observation here
23 out of context. What I'm trying to say here is CAB's
24 prices grow over the time period of Dr. Putnam's
25 comparison from the 2014 to 2024. There has been an

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1 increase in CAB prices, which drives the increase in the
2 sales of CAB products -- in the sales revenue of CAB
3 products. And net new PV capacity is not a revenue
4 measure. It doesn't take into account the increase in
5 prices of various components that CAB sells. And,
6 therefore, the increase in prices is another reason why
7 you can see a disparity in the growth rate of CAB's sales
8 relative to net new PV capacity.
9 Q. So is it your view that in order for that to be
10 a good comparison or an appropriate comparison that,
11 basically, over an eight-year period of time, CAB's prices
12 would have to stay stagnant?
13 A. CAB prices are what they are. The issue here is
14 to find an appropriate benchmark that takes into account a
15 pricing change so that when you see -- at the end of the
16 day you're comparing A to B. And what Dr. Putnam does is
17 after he compares A to B, the entire difference between A
18 and B, he attributes that to the '291 and the '551 patent
19 together. And the observation I'm making here is the
20 difference in the growth rate of A and B partially is
21 accounted for by the increase in prices of CAB products.
22 Q. There's going to be an increase in PV capacity
23 regardless of the prices, correct; from year to year,
24 you're going to expect that there's going to be an
25 increase in net new capacity?

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A. In -- in the data that we look, there is an increase in net new PV capacity.

Q. So if the net new PV capacity is increasing even with prices going up, isn't that -- how does that render the net new PV capacity benchmark an inappropriate benchmark?

A. So here's the issue. Dr. Putnam is saying that net new PV capacity grows at, let's say, 6X, and CAB's sales grew at [redacted]. He calculated excess sales between CAB's sales -- what he calls "excess sales" between CAB's sales and the benchmark. And he's saying that all of these excess sales are because of the '291 and the '551 patent. And what I'm observing here is -- the reason why you're seeing excess sales here is because they are confounding factors in this case of pricing growth that's impacting CAB's sales, but it's not reflected in net new PV capacity. Net new PV capacity is a gigawatt measure; it's not a dollar measure. So net new PV capacity doesn't take into account how prices have evolved in the cable management market over this time period.

Q. So for net new PV capacity to be an appropriate benchmark, in your view, for purposes of comparing to CAB's sales revenues, the only way it would work is if CAB's prices remain stagnant during the entire period of time?

1 MR. DIXON: Objection, form.
2 A. Okay. What you're trying to do is -- CAB's
3 sales are what they are. You cannot go back in time and
4 change CAB's sales. So you need a benchmark that
5 incorporate not only the change in the units sold of CAB,
6 but also the pricing -- the pricing difference. And net
7 new PV capacity doesn't reflect that price in growth.
8 Hence, at the end of the day, Dr. Putnam is calculating
9 excess sales for the purpose of commercial-success
10 inquiry. And he incorrectly attributed all of the excess
11 sales to just the two patents at issue here because of
12 this confounding factors.
13 Q. (BY MR. FLYNN) Do you believe that any increase
14 in CAB prices would have been sufficient to account for
15 the 6X excess factor of CAB revenues over industry growth?
16 A. Not in and of itself. But there are multiple
17 reasons here that together are viewed in its -- in their
18 totality show that the benchmark being used by Dr. Putnam
19 suffers from multiple flaws.
20 Q. But you haven't identified any benchmark, other
21 than market share, that you believe would not be flawed;
22 is that right?
23 A. My assignment, again, is to evaluate
24 Dr. Putnam's declaration. And Dr. Putnam has used an
25 inappropriate benchmark for the commercial-success

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1 inquiry.
2 Q. Well, your assignment is to criticize
3 Dr. Putnam's analysis and to point out how, in your
4 opinion, it's flawed; but you don't consider it to be part
5 of your assignment as to what would have been an
6 appropriate benchmark, in place of the one that Dr. Putnam
7 used?
8 MR. DIXON: Objection, form.
9 A. As we discussed today, there are some
10 possibilities of other benchmarks. For example, market
11 share; for example, the portion of projects that use CAB
12 products versus using other cable management systems such
13 as changing -- such as -- such as trenching and . . .
14 Q. Cable trays.
15 A. Cable trays. Thank you.
16 CAB hasn't provided data relating to its
17 relative performance. So I don't have the information to
18 be able to put forth an alternative benchmark of CAB's
19 sales relative to other things, when such information
20 would need to be coming from CAB's internal information
21 database.
22 Q. I don't think you mentioned it earlier today
23 when you gave me the four additional factors, but you did
24 mention in your declaration, if I understood it correctly,
25 that a decline in prices of other components of the PV

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installation may also be responsible for driving CAB's sales; is that correct? Let me see if I can point you to where I'm talking about.

A. Yes. I see what you're saying. You are referring to paragraph 53 --

Q. That's right.

A. -- in my '291 patent declaration. And here I'm referring to potential reasons why you may have seen an increase in prices of CAB products. The increase in prices of CAB products likely have come from a shift out in the demand of CAB products, which is facilitated by the decline in the prices of other inputs to utility-scale PV installations.

Q. So the example you use in paragraph -- or in Footnote 151 is prices of hardware, correct?

A. Correct.

Q. So if I understand your testimony, you're saying that the decrease in prices of hardware over that period of time, 2017 and 2018, could result in an increased demand for CAB's cable management projects -- cable management products, correct?

A. Yes.

Q. Wouldn't there -- if there was a decrease in one or more components of a PV installation array and the price of those components, wouldn't that drive generally

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1 the demand for more utility-scale PV installations?
2 A. Possibly. And that's why I did not give it as
3 one of the four reasons that I had given you earlier, that
4 you wrote down, as why the PV capacity not being a
5 complete and appropriate benchmark.
6 Q. Everybody seems to be liking to use a sandwich
7 and food analogies in these things -- in these economic
8 analyses. So you obviously reference Dr. Putnam's peanut
9 butter and jelly sandwich analysis, correct?
10 A. Yes.
11 Q. So if you decreased the price of bread, your
12 suggestion, in your declaration at least, is that if you
13 decrease the price of bread, that might increase the
14 demand for lunch meat. That would be analogous to -- if
15 you decrease the price of hardware, that might drive an
16 increased demand for CAB's cable management products. Is
17 that a fair analogy?
18 A. I will take that.
19 Q. As opposed to driving an increased demand for a
20 sandwich that includes lunch meat, right?
21 A. I don't have an opinion relating to the analogy.
22 Q. Everybody talked about food, I had to get that
23 in.
24 MR. DIXON: Ed, I think we've been going for
25 about an hour and a half --

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MR. FLYNN: Okay.

MR. DIXON: -- I don't know if you want to break for lunch soon.

MR. FLYNN: It's up to you. I don't anticipate being all that much longer, but it's completely up to you. If you want to take a short lunch break, we can. If you want to just take a ten-minute break now and come back . . .

(Discussion off the record.)

(Recess from 1:04 p.m. to 1:57 p.m.)

Q. (BY MR. FLYNN) Back after lunch, Ms. Doan.

A. Thank you.

Q. Ms. Doan, in Paragraph 177 of your '178 declaration -- and I believe that translates to Paragraph 58 of your '139 declaration.

A. I'm sorry?

Q. Did I say paragraph -- I meant Paragraph 57 -- 57 in the '178 declaration; and 58 in the '139 declaration. In Paragraph 57 of the '178 declaration, you refer to CAB products that are not used in a system of practice in the '291 patent; is that right?

A. Yes.

Q. And as I understand your criticisms of Dr. Putnam's analysis, is that he acknowledges that 1-carrier hangers and J-hooks and rings are not part of

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1 the '291 system. But he nevertheless included them in his
2 sales analysis; is that correct?
3 THE WITNESS: I need the question again to
4 make sure I hear it properly.
5 (Requested portion was read.)
6 A. No. It's not correct. My critique in Paragraph
7 57 is that although Dr. Putnam excluded J-hooks, rings,
8 and 1-carrier hangers from his sales quantification, he
9 does not -- he does not exclude other components that were
10 used in combination with 1-carrier hangers, J-hooks, and
11 rings.
12 Q. So in Paragraph 57, you say Dr. Putnam claims
13 that sales of all other CAB solar cable management
14 products, other than the 1-carrier hanger, J-hooks, and
15 rings, employ the new '291 patent, correct?
16 A. Correct.
17 Q. And then you say, "However, in CAB's 2018 sales
18 data, there are multiple instances of 1-carrier hangers or
19 rings being sold alongside the parts that Dr. Putnam
20 included in claimed embodying products," right?
21 A. Correct.
22 Q. So you're saying in Paragraph 57 that although
23 he acknowledges that 1-carrier hangers and rings do not --
24 are not part of the standard system claimed by the '291
25 patent, he's nevertheless including them in his 2008 sales

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1 data analysis, right?
2 A. That is not a correct summary of what I'm saying
3 here. Dr. Putnam excludes 1-carrier hangers, J-hooks, and
4 rings from his quantification of CAB's sales in his
5 exhibit. However, from the 2018 sales data, we see that
6 there are other components, like a messenger wire and
7 end-pier kits or mid-pier kits, being sold to a customer
8 alongside with a 1-carrier hanger, for example. And for
9 such instances, Dr. Putnam -- why he excluded the
10 1-carrier hanger, he still included the end-pier kits or
11 the messenger wires that were used in combination -- that
12 were sold in combination with the 1-carrier hangers.
13 Q. So what's the impact of that?
14 A. There's not enough information for me to
15 determine the impact because CAB only provides its data by
16 project, by customer for 2018.
17 And, further, there is not sufficient
18 information to know what portion of messenger wires, for
19 example, are used with 1-carrier hangers for customers
20 that purchased, let's say, 1-carrier hanger, a 2-carrier
21 hanger and messenger wire. There is not enough
22 information to figure out what portion of other components
23 are used with 1-carrier hangers versus a multi-carrier
24 hanger for customers that purchase both 1-carrier hangers
25 and multi-carrier hangers alongside other components.

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Q. Again, you're extracting this information that forms the basis of your statements from Exhibit 2056, correct?

A. Yes. In conjunction with other documents cited in this paragraph of my declaration.

Q. But it's -- again, as we discussed previously, Dr. Putnam's analysis and his calculation of the claimed excess sales over the net new PV capacity benchmark is based on sales information from Exhibit 2046, correct?

A. It is, but the 2018 data in Exhibit 2046 is a similar -- is of a similar amount to the 2018 data that's in Exhibit 2056.

Q. Exhibit 2046, from which Dr. Putnam derived the sales data to support his analysis of excess sales over industry benchmark, included in that Exhibit 2046, for example, is 1-carrier hangers, correct?

A. Correct.

Q. But Dr. Putnam specifically indicated in his declaration that he excluded 1-carrier hangers from his analysis?

A. That is correct.

Q. So the sales data that Dr. Putnam considered in doing his excess sales analysis did not include any sales of 1-carrier hangers, correct?

A. Correct. He excluded 1-carrier hanger.

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1 However, there were messenger wires or end-pier kits or
2 mid-pier kits that may have been sold alongside with the
3 1-carrier hangers. And Dr. Putnam did not subtract
4 away -- did not identify what portion of other components
5 that were used with the 1-carrier hangers.
6 Q. Do I understand you to be saying that the sale
7 of messenger wire, 2-carrier hangers, mid-pier kits, they
8 would be components within the standard system -- used by
9 the standard system, correct?
10 A. As -- as CAB represents an integrated system has
11 a messenger wire, end-pier kits, mid-pier kits, and
12 multi-carrier hangers is my understanding.
13 Q. Okay. And I think you said "integrated system,"
14 but that's also the standard system, correct?
15 A. Correct. I mean to talk about the standard
16 system at this time.
17 Q. So the standard system includes multi-carrier
18 hangers, messenger wire, mid-pier kits, and end-pier kits?
19 A. That is my understanding.
20 Q. And you also understand that the integrated
21 grounding system includes messenger wire end-pier kits,
22 mid-pier kits, correct?
23 A. Correct.
24 Q. Is it your understanding that the multi-carrier
25 hangers are also part of the integrated grounding system

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1 that CAB sells?
2 A. Yes. I do not know whether for integrated
3 system whether the claims of the patent require -- have
4 any requirement on the hangers being multi-carrier hangers
5 or 1-carrier hanger. I don't have any opinion on that and
6 I do not know.
7 Q. Right. But you would agree for the standard
8 system, if CAB sold a standard system that included
9 multi-carrier hangers, messenger wire, mid-pier kits,
10 end-pier kits and may have as part of that sale included
11 1-carrier hangers, the fact that it included 1-carrier
12 hangers as part of that sale wouldn't mean that the other
13 components are practicing the invention of the '291
14 patent, wouldn't you?
15 MR. DIXON: Objection, form.
16 A. You may be asking a question that's outside my
17 technical expertise. My -- my understanding from the
18 current declaration is that in your example if there's a
19 portion, to the extent that there's a portion, of the
20 messenger wires, the end-pier kits and the mid-pier kits
21 that are used with 1-carrier hanger, then that would
22 constitute a system that doesn't practice the '291 patent,
23 because that system has a 1-carrier hanger. And the point
24 I'm trying to make here is why Dr. Putnam excluded
25 1-carrier hangers. He did not make any attempt to

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identify and exclude sales of other components that may have been used with the 1-carrier hangers.

Q. (BY MR. FLYNN) I see what you're saying. If the standard system that was sold included messenger wire and end-pier kits, mid-pier kits, multi-carrier hangers, and it included a single-carrier hanger, would you agree that that standard system still is practicing the '291 patent?

MR. DIXON: Objection, scope.

A. That question may be just outside of my review of the technical expertise.

Q. (BY MR. FLYNN) Well, you --

A. I don't have that technical expertise. But there is -- there is -- what I'm trying to say is -- I apologize. I cut you off.

Q. But you just told me -- if I understood it correctly, you've just told me that the sale of end-pier kit, mid-pier kit, messenger wire, and 1-carrier hanger, you just told me that it's your understanding that that would not practice the '291 patent; is that right?

A. Yes. My understanding is if those four things are used together in a system that doesn't have any multi-carrier hangers, then that system that includes 1-carrier hanger, based on my understanding, does not practice the '291.

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Q. (BY MR. FLYNN) So now I'm just asking you another variation of that. If instead of just including messenger wire, mid-pier kit, end-pier kit, and 1-carrier hanger, it also included multi-carrier hanger, would your understanding be that that system that would include both multi-carrier hangers and a 1-carrier hanger would practice the '291?

A. That's where I do not have an understanding. I'm talking about system where it's just 1-carrier hanger in combination with end-pier kits, mid-pier kits, and messenger wire. Your question is asking me about systems that has end-pier kits, mid-pier kits, messenger wire, 1-carrier hanger, and multi-carrier hanger. And for the latter example, I do not have an opinion nor knowledge of -- appropriate knowledge to answer.

Q. How do you have an opinion or proper knowledge to be able to say that end-pier kit, mid-pier kit, messenger wire, and 1-carrier hanger does not practice the '291?

A. I'm making that statement based upon my -- based upon the Kern declaration, where he described the standard systems to be including cable hangers that has multiple cable carrying surfaces. And a 1-carrier hanger in combination with these other component does not have the multiple cable carrying surfaces. That is -- I'm making

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the statement based on Dr. Kern declaration.

Q. What suggests to you that the sales data that Dr. Putnam relied on in Exhibit 2046 included sales of any systems that only included mid-pier kit, end-pier kit, messenger wire, and single carrier hanger?

A. The -- the data in 2046 is not by project. So you -- it's not by project. It's not by customer. So the only data point you can look at here is exhibit -- the only intersection of sales data that has data by project and by customer is 2018. So in -- for 2018 you can look at -- by customer view of the data in Exhibit 2056. And in Exhibit 2056 you can see examples of customers not buying any -- any multi-carrier hangers. All that the customer bought in certain invoices in Exhibit 2056 were the rings or the 1-carrier hangers in combination with other components like end-pier kits, mid-pier kits, and messenger wire.

Q. Can you give me an example? Can you point to me an example in Exhibit 2056?

A. In my declaration I'm referring to an invoice for [redacted]. And I'm trying to find it here. Because it's -- it's a PDF, it's harder to find than an Excel file.

Q. I believe -- is it on page 1 of the Exhibit 2056; and just shy of halfway down, there are

three line items that begin with 2911 on the left side -- the left column the "Cust" column?

A. Let me see the invoice number.

Q. 2911 -- oh, the invoice number is 109159.

A. You are reading the right one, but I'm still not able to see it yet.

Q. It's small. See it?

A. 109 -- I don't see it in the PO number.

Q. Yeah. 109159.

A. Got it.

Q. Okay.

A. Thank you.

That is -- that is correct. You correctly identified the [redacted] example I was talking about on page 1 of Exhibit 2056.

Q. And so there are three line items there. One is all under the same invoice number, 109159. And those three line items are end-pier kit, mid-pier kit, and ring, correct?

A. That's correct.

Q. And so your understanding is that because it doesn't include a multi-carrier hanger but only refers to a ring, that that -- that sales information should not have been included in Dr. Putnam's analysis; is that correct?

A. Correct. This -- this invoice casts doubt on including the sales because there's no one -- multi-carrier hanger included in this invoice.

Q. Is there any indication in Exhibit 2046 on which Dr. Putnam based his sales analysis that that invoice for [redacted], as identified on Exhibit 2056, was included in the sales data that Dr. Putnam relied upon in the 2046 exhibit?

A. I understand from both the Putnam deposition and the Putnam declaration that the 2018 data is the same data; it's just two different views. In 2046 it's sales data by component; and 2056, it's the same sales data, but it's by component by customer and project. So it's two different views of the same data.

Q. So you believe that whatever is in Exhibit 2056 is included in a different form than Exhibit 2046. Is that your testimony?

A. That's my understanding from reading Putnam declaration and deposition.

Q. Okay. And by the way, those three line items -- end-pier assembly kit, mid-pier kit, ring -- the end-pier assembly kit is a cost of [redacted], correct? The first line of that Invoice Number 109.

A. Yes. End-pier kits, the revenue is [redacted].

Q. And the revenue for the mid-pier kit was

[redacted] correct?

A. Correct.

Q. And the ring [redacted], right?

A. Correct.

Q. That's all total less than [redacted], correct?

A. For this specific invoice, correct.

Q. Did you identify any other invoices that shouldn't have been included in the sales analysis because they don't practice the '291 invention?

A. In Footnote 163, I gave another example where Dr. Putnam has not determined with any sort of certitude if there was certain end-pier kits, mid-pier kits, and messenger wire included in this invoice for Overland Contracting in Footnote 163 of my declaration. That one used 1-carrier hangers.

Q. So in this example -- that's an example of what I was asking you about a few minutes ago. The sales information is for a system that includes end-pier kits, mid-pier kits, messenger wires, 3-carrier hangers, as well as a 1-carrier hanger, correct?

A. Correct.

Q. And that's the example that you don't have an opinion as to whether that practices the '291 invention, correct?

A. Correct. But the point I'm making here is we

1 don't know -- there is not sufficient information being
2 provided that tells us if any portion of the end-pier
3 kits, mid-pier kits, and messenger wire were used with
4 just the 1-carrier hangers.
5 Q. But this example says that it was 3-carrier
6 hangers as well as the 1-carrier hanger, right?
7 A. The customer purchased both 1-carrier hangers
8 and 3-carrier hangers, correct.
9 Q. Right. So if you assumed that the customer
10 purchased as part of the standard system the messenger
11 wire, the mid-pier kit, the end-pier kit, and a 3-carrier
12 hanger but also purchased 1-carrier hangers, would you
13 have an understanding that that system practices the '291
14 patent?
15 A. I do not have technical knowledge to be able to
16 tell you if that system practices the '291, or if all of
17 the components in that system practices -- practice the
18 '291.
19 Q. Okay. In Paragraph 58 of your '139 declaration.
20 A. Yes.
21 Q. You talk about how CAB continued to sell its
22 standard system even after it had introduced its
23 integrated grounding system, correct?
24 A. Correct. And you are talking about Paragraph 58
25 in my '551 patent declaration?

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Q. Yes, I am.
A. Okay.
Q. Yeah. The '551 patent and '139 IPR, yes.
A. Okay.
Q. And you said that in Paragraph 58 that to the extent that CAB continued to sell its standard system after it introduced its integrated grounding system, it should not be including those sales in his analysis of the integrating -- integrated grounding system; is that right?
A. Correct. For his analysis -- for Dr. Putnam's analysis in the '139 IPR -- because the subject matter of the '139 IPR is commercial success of products practicing the '551 patent, and Dr. Putnam represents that the standard system does not practice the '551 patent. Dr. Putnam should not be including sales of standard systems in his analysis in the '139 IPR.
Q. But you understand that Dr. Putnam's analysis from 2018 to 2023 was continuing to track the sales of both the integrated grounding system and the standard system, do you not?
A. Right. Dr. Putnam included components that, according to him, make up both the integrated system and the standard system in the whole period.
Q. And he was including both integrated grounding system and the standard system in his analysis from 2018

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on, as an overall effort to track CAB's overall sales and the extent to which those overall sales exceeded the net new PV capacity benchmark, correct?

A. Yes. But that is not the right question for the '551 patent IPR. Because in the '551 patent IPR, he has to be isolating the commercial success of products that practice the '551 patent. And by his own admission, the standard system does not practice the '551 patent. Nevertheless, he make no effort to isolate sales of products practicing the '551 patent in the '551 patent IPR.

Q. I think I understand your -- your testimony. So in your view, the only proper thing for Dr. Putnam to have done in his analysis of CAB's excess sales over industry benchmark was to isolate sales according to the standard system from sales according to the '551 system; is that right, integrated grounding system?

MR. DIXON: Objection, form.

A. In the '551 patent IPR, he needs to be isolating sales of products embodying the '551, which he did not do.

Q. (BY MR. FLYNN) And -- it's your opinion that he was required to do that as part of his analysis of CAB's overall sales in excess of the industry benchmark that he relied upon?

A. He failed to reach the ultimate goal here, which

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is to assess whether there was commercial success associated with products practicing the '551 patent. He didn't even isolate sales of products that practice the '551 patent in the first place, let alone establish a nexus to the '551 patent.

Q. You agree that the sales of the integrated grounding system under the '551 patent, that those systems would also include the features and advantages of the '291 patent?

A. According to Dr. Putnam -- Dr. Putnam claims that the integrated system incorporates both the '291 and the '551 patents. So the answer to your question is yes, according to Dr. Putnam.

Q. You're aware that by 2023 that the sale of CAB's integrated grounding system was over [redacted] of its sales, correct?

A. According to Mr. Smith, that is correct.

Q. So all of these criticisms that you have of Dr. Putnam -- Dr. Putnam's analysis, you point to individual discrete things that he failed to do, should have done, but didn't do; but you don't have an opinion as to whether all of those things in any remote way impacted his ultimate opinions regarding the excess of CAB sales over industry benchmark, correct?

MR. DIXON: Objection, form.

A. That is not an accurate representation of my opinions. My opinion is these multitude of errors renders both his excess sales analysis inappropriate, as well as his nexus analysis inappropriate.

Q. (BY MR. FLYNN) But you don't dispute that the amount of CAB's excess sales, the degree of which CAB's sales exceed industry benchmark, you don't dispute that that is not significantly in any way impacted by his failures and errors that you've identified, correct?

MR. DIXON: Objection, form.

Q. (BY MR. FLYNN) Let me ask it a different way. For example, the [redacted] invoices that we talked about a few minutes ago, that amounted to less than [redacted] of sales. To the extent that he may have included those sales -- those [redacted] or less in his sales analysis, you said that would be inappropriate -- that would have been inappropriate if he did that, correct?

A. That is one example of the overinclusiveness of the sales in Dr. Putnam's analysis.

Q. And we're talking in 2028 -- well, actually, to compare apples to apples, as you would say, we're talking in 2018, which is what you've indicated repeatedly that Exhibit 2056 pertains to, the year 2018, correct?

A. Yes.

Q. So we're talking about in 2018, sales revenues

were [redacted] correct?

A. Let me check.

Q. I'm referring to Appendix 2.1 of Dr. Putnam's declaration.

A. CAB's sales in 2018 excluding 1-carrier hangers, J-hooks, and rings were [redacted]

Q. And in 2019 those sales essentially tripled to [redacted] correct?

A. You are describing the numbers correctly.

Q. And then it jumps from [redacted] in 2019 to [redacted] in 2020, correct?

A. The numbers are as stated in Putnam declaration, correct.

Q. [redacted] in 2021, jumping to [redacted] in 2022, jumping to [redacted] in 2023, correct?

A. That's -- that is correct within the context of having to compare these sales to an appropriately defined benchmark.

Q. And you're concerned that the [redacted] example that at best may have included improperly less than [redacted] worth of sales would have impacted in any significant manner Dr. Putnam's analysis?

MR. DIXON: Objection, form.

A. You are using one example in my footnote. However, this issue of Dr. Putnam overincluding sales is

not limited to this one example. We just don't have all the information to be able to assess the magnitude of the overinclusion given that CAB only provided by customer, by project sales data for 2018 and not any other years.

Q. (BY MR. FLYNN) Well, if you were just relying on 2056 -- I'm sorry. Were there other examples that you identified from Exhibit 2056, other than the [redacted] example?

A. I did not look at every single project and every single customer here to see exactly what they purchased. I identified --

Q. Why did you focus in on [redacted]

A. I identified -- here are two examples that I could identify from Exhibit 2056. These examples are listed in Footnote 163 of my declaration. However, I'm not representing that these examples are exhaustive of the examples you can find.

Q. Did you review the entire Exhibit 2056?

A. I did look at the exhibit as a whole; I did not look at every single line item.

Q. What made you focus in on the [redacted] example?

A. That is one example that I saw.

Q. But you didn't focus on the entire exhibit -- you didn't identify any other exhibits -- any other examples that -- like [redacted] that only included end-pier

kits, mid-pier kits, and rings without any multi-carrier hangers, correct?

A. Not as written in this portion of my declaration.

Q. In Paragraph 58 of your '178 declaration, it's titled, "CAB Products Not Marked as Embodying the '291 Patent," correct?

A. Correct.

Q. And so, again, my understanding of your testimony in this paragraph of your declaration -- and please correct me if I misunderstand -- is that while CAB marked in its -- its marketing web page on its website, while it marked multi-carrier hangers as embodying the '291 patent, it did not mark end-pier kits, mid-pier kits, or messenger wires, correct?

A. Correct. CAB did not mark end-pier kits, mid-pier kits, and messenger wire as embodying the '291 patents, just to complete the sentence.

Q. Because CAB did not mark end-pier kits, mid-pier kits, and messenger wires as embodying the '291 patent, you're saying it was error for him to include sales of those components in his analysis. Do I understand that correctly?

A. What I'm saying is it calls into question his inclusion of end-pier kits, mid-pier kits, and messenger

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wires when CAB, on its own website, does not identify these three components as practicing the '291 patent.

Q. Is it your understanding and opinion that in order to be properly included in the sales analysis for purposes of commercial success, that only components that are marked under a patent are appropriately included?

A. That's a legal question for which I don't have an opinion on.

Q. But you are rendering that opinion in Paragraph 58, are you not?

MR. DIXON: Objection, form.

A. What I'm saying is Dr. Putnam needs to provide -- should provide an explanation reconciling the his inclusion of these other components that are not marked on CAB's website.

Q. (BY MR. FLYNN) But if --

A. There is -- there appears to be an inconsistency in Dr. Putnam's inclusion of end-pier kits, mid-pier kits, and messenger wire that is not consistent with CAB's marketing website.

Q. If CAB included in its standard system messenger wire, mid-pier kit, end-pier kit, multi-carrier hangers, sold that as a standard system, and if none of those components were identified or listed in any patent, in your opinion should they not be included in the sales

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1 analysis regarding commercial success of CAB's standard
2 system?
3 THE WITNESS: Give me the question again,
4 please.
5 (Requested portion was read.)
6 A. In a commercial-success inquiry, my
7 understanding is you have to isolate the sales that have a
8 nexus to the patent at issue. If you are including sales
9 of multiple components that do not practice the patent at
10 issue, then, ultimately, you will still need to show a
11 discernible nexus to the patent at issue. So you'll have
12 to have a mechanism to account for sales that are not
13 practicing the patent.
14 Q. (BY MR. FLYNN) You -- your understanding of the
15 '291 is it claims a system, correct?
16 A. Yes.
17 Q. So if you have multiple components that make up
18 that system in a way that practice the '291 patent, is it
19 your opinion that you can only include sales of components
20 that are specifically and separately listed in a patent?
21 MR. DIXON: Objection, form.
22 A. I don't know what you mean by components are
23 listed separately and something in a patent.
24 Q. (BY MR. FLYNN) Okay. I'll ask it again. You
25 understand that the '291 patent is a system patent?

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A. Yes.

Q. And you understand that the system patent -- strike that.

You understand that the components of the system claimed in the '291 patent would include, for example, messenger wire and multi-carrier hangers?

A. That's my understanding based on the representations made by Dr. Putnam.

Q. So if the -- the messenger wire and the multi-carrier hangers were not themselves as separate components identified in a CAB patent -- in other words, if there was no CAB patent that was directed to a messenger wire, if there was no CAB patent that was directed to a multi-carrier hanger -- and the only patent we're talking about is the '291 patent that claims a system -- is it your understanding and opinion that it would be improper to include sales of that messenger wire and that multi-carrier hanger that weren't identified separately in another patent or some patent?

MR. DIXON: Objection, form, scope.

A. Your question is frankly very compounded to me and I think we're venturing into areas that I'm not -- I don't have the technical or legal knowledge to be able to opine to.

Q. (BY MR. FLYNN) Well, I'm just trying to

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ascertain the scope of your opinion, which seems to be exactly what I'm asking about. Because I understand your paragraph 58 to be saying that since we have all these different components of CAB's standard system but that they're only patents that identify hangers, that you shouldn't include all those other components that aren't identified in a patent?

MR. DIXON: Objection, form.

Q. (BY MR. FLYNN) Is that misunderstanding your testimony in Paragraph 58?

A. In Paragraph 58, I'm pointing out a potential inconsistency that Dr. Putnam should provide an explanation for and I haven't seen that explanation being provided -- an explanation being provided.

Q. And then in Paragraph 69 of your '178 declaration -- by the way, did you write this declaration yourself?

A. Yes. I have a team of people that assist me, but ultimately all the words in the declarations are my words.

Q. Does that mean you authored the words in this declaration?

A. I either write the words myself or review and revise certain portions. For example, I may have team member who helped me draft a background section. And I

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reviewed and revised the words to be my own words. At the end of the day, all the analyses and the narrative of this declaration are my own.

Q. I understand from Paragraph 69 of your declaration in the '178 IPR that if multiple patents list the hangers that are used in the standard system, it may be those other patents that are driving CAB's sales rather than the '291 patent. Do I understand that correctly?

A. Correct. Dr. Putnam has not ruled out the possibility that other CAB patents that CAB identified as covering the components he included may have been the driving force of the sales, as opposed to the 2091 and the '551 patents.

Q. So the '291 patent only requires a multi-carrier hanger, correct?

A. I don't really have -- I don't have technical knowledge to answer the question. It's my understanding that that is a representation that has been made by CAB declarants.

Q. Okay. So let's just assume that that's true.

A. Okay.

Q. That the '291 patent -- that the hanger components of the claimed system are required to be multi-carrier hangers. Okay?

A. Okay.

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1 Q. So there could be a 2-carrier hanger that could
2 practice that standard system, right? There could be a
3 3-carrier hanger, 4-carrier hanger. There would be
4 multi-carrier hangers that, according to your
5 understanding, would be part of the standard system that
6 would practice the '291 patent, correct?
7 A. Okay.
8 Q. If there was one patent that was directed to the
9 particular 2-carrier hanger and another patent that listed
10 the 3-carrier hanger and another patent that was directed
11 to the specific configuration of the 4-carrier hanger,
12 wouldn't all of those hangers still be part of the
13 standard system practicing the '291 patent?
14 A. The issue is Dr. Putnam has to show --
15 Dr. Putnam stated -- the overarching goal here is for
16 Dr. Putnam to show that the '291 patent in the '178 IPR to
17 be a substantial cause of CAB's commercial success.
18 Dr. Putnam has not disentangled the contribution of the
19 '291 from the '551; neither has he disentangled the
20 contribution of the '291 and the '551 from other CAB
21 patents. Without that consideration -- that isolation,
22 Dr. Putnam does not have a basis to opine that the '291
23 and the '551 have an economic nexus to the sales.
24 Q. So the standard system that practices the '291,
25 if it includes a multi-carrier hanger that because of its

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1 configuration is listed under a separate patent, your
2 opinion is that Dr. Putnam has to rule out the possibility
3 that it's not the '291 patent that's driving its sales.
4 It's that particular hanger that's used in the claim
5 system that is driving its sales; is that right?
6 MR. DIXON: Objection, form.
7 A. Let me state that again in my own words. Let's
8 say if there's a 1-carrier -- let's say if there's a
9 multi-carrier hanger that practices both the '291 and at
10 the same time that 2-carrier hangers is marked by CAB as
11 embodying numerous other patents and that that is a true
12 fact based on CAB's marketing website, in order to isolate
13 and make an argument that the '291 patent has a nexus to
14 CAB's sales, Dr. Putnam has to consider the relative
15 contribution between the '291 patent and these numerosity
16 of patents that CAB identifies as covering the same
17 multi-carrier hanger, and he hasn't done that exercise.
18 He hasn't even identified or even considered or mentioned
19 other CAB patents in his declarations.
20 Q. (BY MR. FLYNN) Is it your understanding that a
21 multi-carrier hanger by itself practices the '291 patent?
22 MR. DIXON: Objection, scope.
23 A. No, that's not my understanding.
24 Q. (BY MR. FLYNN) Is it your understanding that
25 what practices the '291 patent is a system that includes

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1 messenger wire and multi-carrier hangers?
2 A. Yes. Based on Dr. Putnam's declarations.
3 Q. So if you have -- strike that.
4 So if the standard system consists of a
5 messenger wire and multi-carrier hangers, what difference
6 does it make whether one of the hangers that would be part
7 of the practicing system has its own separate patent
8 directed to it?
9 MR. DIXON: Objection, form.
10 A. There are multiple components of the standard
11 system that are identified by CAB as also being covered by
12 numerous other CAB patents. In order to conclude, as
13 Dr. Putnam did, to a nexus between the two '291 patent and
14 CAB's sales, Dr. Putnam has to consider and isolate the
15 contributions of the '291 patent from the rest of the
16 patents that CAB has covering these various components
17 that are in his sales analysis. He hasn't done that
18 exercise.
19 Q. (BY MR. FLYNN) Is that your understanding of
20 what the legal requirements are to prove nexus?
21 A. I'm an economist. I'm talking from the
22 perspective of what I understand to be a proper economic
23 analysis that isolates and identifies an economic nexus
24 between sales and certain patents.
25 Q. Paragraph 56 of both declarations, you refer to

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1 CAB products sold through distributors, correct?
2 A. Yes.
3 Q. Again, I want to make sure I understand what
4 your theory is or your opinions from this paragraph. As I
5 understand it, you're stating that because some of CAB's
6 sales are to distributors, you then either resale or
7 distribute to the end customer; and because CAB isn't
8 there to see how the -- or whether the end customer
9 assembles the components that CAB sells to the distributor
10 for sale ultimately to the customer, that there's no way
11 of knowing whether or not the customer actually assembled
12 those components to practice the claimed invention and,
13 therefore, you shouldn't include the sales number of
14 those -- or the sales of those -- of those components.
15 Does that fairly summarize what your opinion is?
16 MR. DIXON: Objection, form.
17 A. Close. What I'm saying is Dr. Putnam's
18 inclusion of all the components here is likely
19 overinclusive because a large portion of CAB's sales are
20 through distributors and when the sales are --
21 Q. (BY MR. FLYNN) I'm sorry. I didn't hear that
22 last part of what you -- is likely overinclusive because a
23 large portion of CAB's sales are through distributors.
24 I'm sorry.
25 A. Yes. And with sales that go through

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1 distributors, CAB has no insight into whether the
2 different components are assembled together in a way that
3 constitute the system claimed by the '291 patent.
4 Q. So CAB receives an order for its standard
5 system. And in response to that order, CAB sells
6 messenger wire, multi-carrier hangers, and necessary
7 hardware to assemble the standard system, including
8 mid-pier kits and end-pier kits --
9 (Interruption in proceedings.)
10 MR. FLYNN: All right. Let me start over.
11 Q. (BY MR. FLYNN) So let's assume CAB receives an
12 order for its standard system. And CAB provides to the
13 distributor messenger wire, multi-carrier hangers, and
14 other hardware components including mid-pier kits and
15 end-pier kits that are part of its standard system but
16 that need to be assembled by the end-user customer. And
17 CAB ships that standard system to the distributor and the
18 distributor in turn ships it to the end customer and the
19 order specified that it wanted CAB's standard system.
20 Your testimony is that Dr. Putnam, in order to include the
21 sales of that system to the distributor and to the end
22 customer, that he needed to verify that the end customer
23 actually assembled the system as it was intended to be
24 assembled; is that correct?
25 MR. DIXON: Objection, form.

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A. No, that is not my -- that is not the point I'm making in Paragraph 56. If there's indeed such a purchase order, as you describe, then, under Dr. Putnam's understanding of what an -- of what a standard system entails, that sale would be properly included in the sales calculation. However, there could be purchase orders where the distributors may have purchased only messenger wire, for example. And Dr. Putnam nor CAB have provided evidence that those messenger wires, for example, are used -- are assembled together with other product to constitute a system claimed by the '291 patent.

Q. (BY MR. FLYNN) So if the purchase order specified a standard system consisting of messenger wire, multi-carrier hangers, and hardware -- the necessary hardware components, including end-pier kits and mid-pier kits, and CAB ships to its distributor those components of the standard system -- messenger wire, multi-carrier hangers, end-pier kits, mid-pier kits -- and the distributor ships those components to the end customer, is it your opinion that the sales in that instance -- the sales numbers in that instance should not be included unless it be can be confirmed that the end customer actually assembled all those components shipped by CAB into the standard system?

A. No. If your example is true that there is such

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a purchase order under those circumstances, those sales should be included in the -- in Dr. Putnam's quantification of standard system sales.

Q. So, then, what is your criticism in Paragraph 56 with respect to what Dr. Putnam did or did not do?

A. For example, if a distributor purchases messenger wires only and nothing else.

Q. I see.

A. Then -- Dr. Putnam hasn't provided evidence that those messenger wires are using a system that constitute a system claimed by the '291 patent.

Q. I understand. You're suggesting that if Dr. Putnam only included -- strike that.

You're suggesting that if Dr. Putnam included sales of only a messenger wire to a distributor, he has no way of knowing whether that messenger wire was used to assemble other components together with it to form the standard system; is that it?

A. Correct. That's one example.

Q. Do you have any evidence that that occurred or that any of the sales number that he included in his analysis fit that situation?

MR. DIXON: Objection, form.

A. I did recall seeing at least one purchase order in the 2018 sales data, where there was one customer that

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1 purchased only messenger wire. I don't -- I don't
2 remember the name of the customer, sitting right here, but
3 I did recall seeing at least one example.
4 Q. (BY MR. FLYNN) And when you saw that one
5 example, did you confirm or make any attempt on your own
6 to confirm that that one example was included in
7 Exhibit 2056?
8 A. I can only work with the data I have in this IPR
9 that CAB provided. Dr. Putnam has obtained by customer,
10 by project, sales data only for 2018, which makes it not
11 possible to do a full evaluation of his flaws for other
12 years and across the whole dataset. Apologies.
13 Q. No problem.
14 I'm not talking about flaws in other years.
15 I'm talking about your asserted flaw in 2018. And I'm
16 asking you whether or not you have any basis for believing
17 that that one example that you can't recall right now but
18 that you remember at the time seeing, where a customer
19 from 2056 in 2018 only purchased messenger wire, whether
20 the sale of that messenger wire was carried over and
21 included in Exhibit 2046 on which Dr. Putnam based his
22 analysis.
23 A. As we discussed, my understanding is
24 Exhibit 2056 and Exhibit 2046 are portraying the same data
25 for 2018. It's just different views. One dataset is by

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customer, by project, and the other dataset is by part number.

Q. So anything in 2018 -- I'm sorry. Anything in 2056 is in 2046, according to your understanding?

A. Yes. Although there is a small discrepancy in the sales between 2046 and 2056, as I mentioned to you before.

Q. But would it account for that discrepancy in 2056 is just a different form in 2046 and vice versa?

A. I don't have enough information to be able to answer that question.

Q. Did you review Dr. Putnam's deposition testimony in which he explained the 2046 came in response to a request from CAB to provide sales information with respect to its standard systems?

A. Yes, I reviewed Dr. Putnam deposition in full.

Q. Do you -- did you -- do you recall the portion of Dr. Putnam's deposition testimony -- any portion of Dr. Putnam's deposition testimony where he only asked CAB to provide sales of individual components of the standard system without the other components of the standard system?

A. Dr. Putnam used Exhibit 2046, which has just the sales by components.

Q. But did you understand that those -- 2046, which

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1 list the components and the sales of those components, was
2 provided in response -- by CAB in response to the request
3 to provide sales data for the standard systems?
4 MR. DIXON: Objection, form.
5 A. I don't have any way to verify that. The data
6 doesn't say "standard system" anywhere. It just says --
7 it just has part numbers. And the issue I'm pointing out
8 here is Dr. Putnam hasn't provided any assurances that
9 each and every component in the sales data he relied on
10 were using a system that constitute the system claimed by
11 the '291 patent.
12 Q. (BY MR. FLYNN) So another possibility that
13 Dr. Putnam failed to investigate, correct?
14 A. Yes.
15 Q. Did you think of every possibility that could
16 have accounted for the growth in CAB's revenues as part of
17 your assignment?
18 A. The potential reasons that could account for the
19 discrepancy in CAB's sales growth versus the
20 inappropriately defined benchmark that Dr. Putnam used
21 have been described in my declarations, as well as earlier
22 in this deposition.
23 Q. And it's your opinion that Dr. Putnam's required
24 to analyze every one of those possibilities regardless of
25 how minimal the sales figures related to one such

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1 possibility before he could properly do his analysis?
2 A. Dr. Putnam and CAB bears the burden of proving
3 commercial success in this case. And there are a
4 multitude of factors that Dr. Putnam did not consider in
5 both the commercial success inquiry as well as the nexus
6 inquiry.
7 Q. Is it your opinion that as part of CAB's burden
8 of proof that Dr. Putnam was required to identify and then
9 discount every possibility other than the '291 patent that
10 could have driven CAB's sales?
11 A. I would not use the word "every" possibility.
12 But he -- in his case, Dr. Putnam has gone to the extreme.
13 And he said in his declaration that there is no other
14 hidden factor that could have driven CAB's sales growth
15 apart from the '291 and the '551 patent. That assertion
16 is incorrect in light of the evidence that there are a
17 number of factors that could have driven the sales
18 discrepancy -- the sales growth discrepancy that
19 Dr. Putnam calculated.
20 Q. The fourth of the other factors that you
21 identified earlier today was the inclusion in your '139
22 declaration of international sales, correct?
23 A. Correct.
24 Q. Because it would be improper to include -- to
25 compare international sales with a U.S. benchmark,

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correct?

A. Correct. It would be improper to compare CAB's sales that have both U.S. and foreign sales with a benchmark that is just U.S.-only benchmark.

Q. So you calculated for 2018 based on Exhibit 2056 --

A. Yes.

Q. -- that there was -- that 2056 included -- I don't have it marked properly, but let me see. Oh, I'm looking at the wrong one.

The sales numbers -- sales data included in Exhibit 2056 included [redacted] of international sales, correct?

A. Correct.

Q. And where do you state that in your declaration?

A. I said that on page 34 of my '551 patent declaration.

Q. And specifically where, on page --

A. Footnote 160.

Q. [redacted]

A. Correct.

Q. And so for 2018, the inclusion of [redacted] of international sales, in your opinion, could that impact Dr. Putnam's sales analysis in any significant way with respect to the excess of CAB's revenues over industry

benchmark in 2018?

A. Yes. Dr. Putnam's sales information included [redacted] of sales that are international sales. And he compared that to U.S.-only benchmark. So we do not know what would be CAB's rate of growth in the U.S. relative to U.S.-only net new PV capacity, looking at his exhibits.

Q. CAB sales in 2018, as identified by Dr. Putnam in Appendix 2.1 to his declaration, amounted to [redacted] correct?

A. Correct.

Q. That was a [redacted] from 20 -- 2017 to 2018 in CAB's revenues, correct?

A. Yes. That's what Dr. Putnam shows.

Q. Well, you don't disagree with that calculation, right?

A. Correct. I do not disagree with the math.

Q. The net new PV capacity benchmark in 2018 was 4.9 total gigawatts, correct?

A. Correct.

Q. And it was a growth of negative 2.2 percent, right?

A. Yes. That's what the math shows.

Q. So Dr. Putnam is showing in his analysis that CAB's revenues in 2018, which had grown from the year

before by [redacted] he was comparing that to net new capacity -- net new PV capacity in 2018, which had dropped 2.2 percent from the prior year. So there's a discrepancy of [redacted] -- or an excess, I should say, of [redacted] percent of CAB's sales over net new PV capacity for 2018, correct?

MR. DIXON: Objection, form.

A. You are doing the math correctly. But, again, you need to ask if the math you are doing is meaningful, which, as we discussed, I disagree with the subtraction of these percentages to come up with excess sales.

Q. (BY MR. FLYNN) [redacted] of CAB's [redacted] in 2018 is [redacted], correct?

A. Yes. I will take your calculation to be correct because you have a calculator.

Q. I can reveal on the record that I pulled out my calculator and did the calculation to make sure it's correct.

So -- so it would have taken CAB's [redacted] down to [redacted] or [redacted] -- over [redacted] still if you subtract [redacted] out of those sales as representing international sales, correct?

A. Correct.

Q. So you would still have [redacted] -- I'd say [redacted] which might have been [redacted]

growth from the prior year and still comparing the negative 2.2 percent growth in net new PV capacity from the prior year, correct?

MR. DIXON: Objection, form.

A. We just don't have enough information. Because in 2017 -- again, the 2017 figure would have some U.S. sales in there and some international sales in there.

Q. (BY MR. FLYNN) How do you know that?

A. Because Dr. Putnam testified, and I quote, "I don't think we restricted the sales to U.S.-only sales."

Q. How do you know that there were international sales in 2017?

A. CAB doesn't give by project, by customer, sales data for any other years outside of 2018. We know that in 2018, there is [redacted] of sales coming from international countries. I do not have the information to tell you what portion of the sales in 2016 are international versus U.S. However, I'm raising in my declaration, on page 34 in the '291 patent IPR, another potential flaw, one other issue that Dr. Putnam hasn't accounted for in determining his CAB sales data to be used in the comparison. I do not have sufficient information to be able to perform an illustrative adjustment of what these sales would be limiting to the U.S.-only sales.

Q. Have you made any calculation of what percentage

of CAB's sales in 2023 would have had to include international sales in order to arrive at a compound annual growth rate that is the same as the industry's compound annual growth rate?

A. I -- I haven't done that determination. I see that the industry was growing at 62.9 percent, as captured by Dr. Putnam's benchmark, from 2022 to 2023. And CAB's sales was growing at [redacted] from 2022 to 2023.

Q. So the -- U.S. net new capacity was growing at almost 63 percent from 2023 to 2022, correct?

A. From 2022 to 2023.

Q. That's what I meant. From 2022 to 2023?

A. Yes.

Q. That's U.S. capacity, right?

A. Correct.

Q. Do you have any idea how much CAB's international sales would have had to have been in 2023 to have equaled the compound annual growth rate of net new U.S. PV capacity?

A. I haven't done that calculation. And given -- if -- if you are taking sales -- some sales or you don't -- I don't have sales data by location that CAB has provided for neither 2022 nor 2023. So you are asking me to potentially calculate a growth rate between two years, neither of which I have data for that is by location.

Q. Well, you can see from Dr. Putnam's calculations that for the period of time that he calculated a growth ratio of [redacted], that's covering from 2015 to 2023, correct?

A. I'm sorry. I don't see [redacted] from 2022 -- can you repeat your question, please?

Q. Yes.

For the whole period 2015 to 2023, Dr. Putnam calculated a growth ratio of [redacted] increase in sale -- based on the increase in sales from 2015 to 2023, correct?

A. Yes. That's what Dr. Putnam shows in this exhibit.

Q. And he also calculated a growth ratio for the net new U.S. utility-scale PV capacity from 2015 to 2023 at a growth ratio of 5.7, correct?

A. Yes.

Q. In order for international sales to have made CAB's growth ratio of [redacted] the same as net new U.S. PV capacity growth ratio of 5.7, do you know what percentage of CAB's sales would have had to have been comprised of international sales?

A. I don't think your question is reasonable. U.S. sales -- non-U.S. sales is a portion of CAB's sales. And this is one of several errors in Dr. Putnam's quantification of the comparison he's doing. You are

taking one area in isolation and asking me to perform a math calculation for which there is insufficient data to perform such a math calculation.

Q. Dr. Putnam has given his analysis that CAB's growth ratio and its sales revenues is almost [redacted] times from 2015 to 2023, [redacted], correct?

A. Yes.

Q. And he's calculated a growth ratio in the increase of net new U.S. PV capacity in 2015 to 2023 as almost [redacted], correct?

A. That's what his calculation shows.

Q. So according to Dr. Putnam's calculations, CAB's revenue growth rate is six times the growth rate of net new U.S. PV capacity over that period of time, correct?

A. Yes, using this benchmark that I disagree with for the reasons discussed.

Q. Yes. And you've isolated one year where you believe, based on an exhibit that Dr. Putnam did not rely on for his sales data, that the sales data for that year included [redacted] international sales that should not have been included, correct?

MR. DIXON: Objection, form.

A. Yes. Except I would also want to highlight again that Exhibit 2056, CAB's 2018 sales data, that is very close in magnitude to 2018 sales data in Exhibit 2046

that Dr. Putnam used.

THE WITNESS: If possible, can we take another break?

MR. FLYNN: Sure.

(Recess from 3:21 p.m. to 3:37 p.m.)

Q. (BY MR. FLYNN) Ms. Doan, we talked earlier this morning about your previous testifying experience. And you identified those cases in which you testified on issue of -- issues of patent infringement damages, correct?

A. Yes.

Q. In applying your -- I'm sorry.

In analyzing the issue of commercial success in these IPR proceedings, did you apply the same kind of analysis that you applied in your patent infringement damages cases?

MR. DIXON: Objection, form.

A. I apply many of the same general principles that are in my patent damages cases relating to Georgia-Pacific Factor 8 and Factor 13, as we discussed, but they're not identical analyses. There are also many differences. Because in a patent case, many times the analysis may require specifically quantifying a royalty rate commensurate with the contribution of a patented technology, and that usually requires more calculations and more analysis to be able to arrive at that royalty

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1 rate in -- in combination with other Georgia-Pacific
2 Factors that wouldn't be applicable here.
3 Q. (BY MR. FLYNN) Have you testified in patent
4 infringement damages situations where it was necessary to
5 apportion -- to make an apportionment of the -- of the
6 patent's success to other unclaimed features of the
7 product?
8 A. The issue of apportionment comes up all the time
9 in my patent damages cases. Comes up a lot.
10 Q. And did you apply that apportionment analysis
11 here in this case in your determination of commercial
12 success, or in your evaluation of Dr. Putnam's
13 determination of commercial success with respect to the
14 CAB products?
15 A. I'm not asked to perform any specific -- any
16 apportionment analysis here. However, in a commercial
17 success case, it is important for us to isolate -- or to
18 identify a nexus between the commercial success and the
19 patents at issue. And the issue of identifying a nexus
20 involves evaluating the different contributors of value.
21 In my declaration I discuss potentially other reasons that
22 contributed to CAB's sales and relate it to the '291 and
23 the '551 patent.
24 Q. You criticized Dr. Putnam's analysis in which he
25 assigned a 50/50 apportionment to the value of the '291

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1 and '551 patents, correct?
2 A. Correct.
3 Q. And you describe that as arbitrary and
4 unsupported, right?
5 A. Correct. Even Dr. Putnam acknowledged in his
6 deposition that there was no evidence to support a 50/50
7 split.
8 Q. I believe what Dr. Putnam testified is that it
9 was impossible to decompose the two patents so as to
10 assign a specific percentage to each patent, correct?
11 A. That is correct.
12 Q. And because he could not do that, his 50 percent
13 division of sales between the two patents, you've
14 characterized as entirely meaningless, correct?
15 A. Correct.
16 Q. In your view, if you can't apportion a specific
17 percentage to each patent in isolation, then you cannot
18 attribute commercial success to either patent; is that
19 correct?
20 THE WITNESS: Say that one more time for me,
21 please.
22 (Requested portion was read.)
23 A. You do not need to identify a specific
24 percentage. However, you do need to establish a
25 discernible nexus between, let's say, the '291 patent and

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1 the sales at issue. And in this case, there are multiple
2 confounding factors unrelated to the '291 patent or the
3 '551 patent that explain the sales and the trends in sales
4 of CAB products that Dr. Putnam hasn't accounted for.
5 Q. What was the last thing you said? What sales?
6 A. Sales trends.
7 Q. I'm sorry?
8 THE WITNESS: Can you help me?
9 THE REPORTER: Sales trends.
10 MR. FLYNN: Trends. Trends. I'm sorry.
11 Thank you.
12 Q. (BY MR. FLYNN) You're aware that, of course, as
13 we discussed today, that CAB sold its standard systems
14 from 2015 through 2017 and into 2018, correct?
15 A. Correct. And even after 2018, CAB continued to
16 sell standard system sales, according to Mr. Smith.
17 Q. Yes. But in 2018, that was the year that the
18 sales of CAB's standard system was transitioning
19 predominantly into the sales of its integrated grounding
20 system, correct?
21 A. According to the coloring scheme in Exhibit 2056
22 that Dr. Putnam described in his deposition, yes.
23 Q. And I believe you also referred to testimony
24 from Mr. Smith in which you noted that, according to his
25 testimony, that CAB's integrated grounding system sales

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came to account for [redacted] of its sales, correct?

A. Yes. I recall that testimony from Mr. Smith's declaration.

Q. And as I understand your testimony at various times today, it is your opinion that it is necessary to isolate the sales to the standard system from -- from sales to -- of the integrated grounding system, correct?

A. Yes. In the '139 IPR, given Dr. Putnam's assertion that the standard system does not practice the '551 patent, his analysis does not isolate sales of the system that practices the '551 patent.

Q. So as we've also talked about a few times today, your understanding, at least from the materials that you reviewed, is that the CAB integrated grounding system includes the advantages and features of the '291 standard system, correct?

A. That's Dr. Putnam's representation, which I assumed for the purpose of my evaluation.

Q. So when CAB began and continued to sell its integrated grounding system, it's integrated grounding system still included the aboveground messenger wire supported cable management system of the '291 patent, correct?

MR. DIXON: Objection, form.

A. I don't have any independent opinion on that, but that is my understanding from Dr. Putnam's representations.

Q. (BY MR. FLYNN) In addition to the advantages of the aboveground messenger wire cable management -- messenger wire supported cable management system of the '291 patent, then the integrated grounding system also included an additional advantage and feature by virtue of using a messenger wire as both a support structure to support cable hangers and current wires and as a -- an equipment grounding conductor, correct?

MR. DIXON: Objection, form.

A. Dr. Putnam represents that to be the case, which I assumed for the purpose of my evaluation of him -- of his report.

Q. (BY MR. FLYNN) So the sale of the integrated grounding system incorporates not just the benefits and advantages of the integrated grounding system, but also incorporates the benefits and advantages of the standard system, correct?

A. Under Dr. Putnam's assumptions, Dr. Putnam does make the assumption that you just outlined, which I -- in evaluating his report, I operate within the assumptions that he's making.

Q. But your opinion is that Dr. Putnam was required

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1 to apportion a percentage to the '291 patent in isolation
2 of the '551 patent, correct?
3 A. The assignment to answer the commercial-success
4 inquiry requires isolating the contributions of the '291
5 and the '551 patent. Dr. Putnam by his own admission --
6 he states that he cannot separately identify the
7 contribution of the '291 and the '551 patent.
8 In addition, Dr. Putnam is not able to
9 identify the contributions of the '291 and the '551 patent
10 from all the other CAB patents. So he fails the nexus
11 question on at least both of those endeavors.
12 Q. So when you said in the first part of your
13 answer that he can't identify the contributions of the
14 '291 patent separate from the contributions of the '551
15 patent, it's true that he identified the contributions of
16 each patent in terms of the advantages and benefits that
17 each patent system that practices those patents provides,
18 correct?
19 A. To clarify, what I mean is he calculated a
20 certain amount of excess sales as representing the alleged
21 commercial success. And by his own admission, he cannot
22 separately identify the excess sales that is due to the
23 contribution of the '139 patent and the excess sales
24 allegedly due to the contribution of the -- of the '291
25 patent. I may have messed up the patent names in what I

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1 just said.
2 Q. I'd like to verify for you, but, again, this
3 thing isn't working, so I don't --
4 THE WITNESS: Can you . . .
5 (Requested portion was read.)
6 A. Yes. Where I said "'139" that should be "'551
7 patent," please. Thank you.
8 Q. (BY MR. FLYNN) So what Dr. Putnam was saying is
9 that there is no way to separate out a specific percentage
10 of contribution or value for each patent, correct?
11 A. That's what he says in his declaration, yes.
12 Q. And particularly with the integrated grounding
13 system that includes the benefits and advantages of both
14 patents, it's difficult, if not impossible, to assign a
15 specific percentage of value to each patent, correct?
16 A. That is what he says. What that means is he
17 hasn't sufficiently proved that the '291 patent is a
18 substantial cause for the commercial success; neither has
19 he sufficiently proved that the '551 patent is a -- is a
20 substantial cause of the claimed commercial success.
21 Q. If Product A has certain advantages and a
22 customer chooses to purchase Product A because of those
23 advantages, and Product B comes along and it includes not
24 only the advantages of Product A, but now adds to it its
25 own advantages of Product B -- correct -- so a customer

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1 would understandably choose Product B that includes the
2 advantages of both products, correct?
3 MR. DIXON: Objection, form.
4 A. I will take that example. You can continue.
5 Q. (BY MR. FLYNN) If Product B that includes the
6 advantages of both Product B and Product A can be shown to
7 be commercially successful, is it necessary, in your
8 opinion, to ascribe or attribute or apportion a specific
9 percentage of value to each of the benefits and advantages
10 of Product A distinct from Product B in order -- in order
11 to be able to determine commercial success?
12 MR. DIXON: Objection, form.
13 A. In order to determine commercial success
14 attributable to a specific feature covered by an
15 individual invention, when there are multiple potential
16 causes of the commercial success, which could be two
17 patents. And in this case, it's more than two patents.
18 It's multiple other patents of CAB. Dr. Putnam has not
19 exerted any efforts to be able to show that the '551
20 patent is a substantial cause of commercial success given
21 that he's not able to decompose the excess sales. And he
22 has not accounted for other driving forces of the -- of
23 the sales.
24 Q. (BY MR. FLYNN) If you look at Dr. Putnam's
25 declaration, please, paragraph -- let's at look at

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Figure 2 as part of Paragraph 47. Figure 2 on page 36 of 52 of his '178 declaration.

A. I am at Figure 2 in his '178 declaration.

Q. Setting aside the issue of your disagreement that net new PV capacity is an appropriate or not appropriate benchmark, assume for purposes of these questions that it is.

A. Okay.

Q. In 2018 CAB's sales are already in excess of the industry benchmark, correct, as of 2018?

A. I would like to follow along with you, but it's really difficult to be comparing sales in dollars to be higher than capacity in gigawatts. That comparison -- that just doesn't make sense.

Q. Okay. Whether it makes sense -- and, again, we understand -- I certainly do -- that you disagree that net new PV capacity is the right -- is the correct benchmark. You disagree with that, I understand it.

A. Yes.

Q. But that's the one we're using and that's the one that my question is based on.

A. Okay.

Q. So in 2018 CAB sales are already well in excess of net new PV capacity, correct?

A. Let me refer to Dr. Putnam's numbers to follow

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along with you.

Q. Okay.

A. So in Appendix 2.1, Dr. Putnam showed that CAB sales in 2018 was [redacted]. And in 2018 net new utility-scale PV capacity was 4.9 gigawatts. And you want me to assume that [redacted] in dollars is greater than 4.9 in gigawatts?

Q. I'm asking you to assume for purposes of my question that in 2018, CAB's revenues exceeded net new PV capacity in terms of gigawatts.

A. I can try to follow along with you, but I will repeat again that when you compare two numbers, one number is in dollars, one number is in gigawatt. And you've got [redacted] relative to 4.9 gigawatts. It doesn't make sense to be comparing two numbers of entirely different measurements.

Q. Is there ever an instance --

A. Dollars --

Q. I'm sorry.

A. -- and gigawatts -- and I do understand that [redacted] is higher than 4.9. And I'm willing to follow along with you. But I'll just point out again that it -- it doesn't make much sense.

Q. Is there ever an instance, in your experience, when you compare revenues to a benchmark that is expressed

in a different metric?

A. I -- I'll have to think through all of my cases. I can't sit here and think one right now off the top of my head.

Q. So in order for this to be a valid comparison by Dr. Putnam, is it your testimony that he has to compare dollars to dollars?

MR. DIXON: Objection, form.

A. I haven't rendered that opinion. But Dr. Putnam --

Q. (BY MR. FLYNN) Is that what you're saying now in your answer?

A. Dr. Putnam compares growth rates. You are comparing absolute terms. You are comparing [redacted] to 4.9 gigawatts capacity. You are doing even more than what Dr. Putnam built in his declaration.

Q. Okay. Let's talk about growth rates, then. Using the Appendix 2.1, in 2016 to 2017 the growth rate -- I'm sorry. In 2017 to 2018, the growth rate in CAB revenues went from [redacted] to [redacted], correct?

A. Yes.

Q. The growth rate at net new PV capacity, from 2017 to 2018, went a negative 39.4 percent to negative 2 percent, correct?

A. Yes. That's what is shown in Appendix 2.1.

Q. And those growth rates -- comparing CAB's growth rate in sales revenues from 2017 to 2018 to net new PV capacity growth rate from 2017 to 2018, the growth rate of CAB's revenues is greater than the growth rate of net new PV capacity, correct?

A. Using Dr. Putnam's benchmark, yes.

Q. So now I'm using the right, at least, comparators?

A. At least within his -- Putnam's framework.

Q. Within his analysis?

A. Yeah, you are portraying his analysis more accurately now.

Q. And so now that I'm using the right comparators in his analysis, from 2018 to 2019, CAB's revenues went from [redacted] to [redacted]. If I'm doing my math in the head correct, that's about a [redacted] increase from 2018 to 2019, correct?

A. I'll accept the math.

Q. From 2018 to 2019, the growth rate for net new PV capacity went from negative 2.2 percent to 13.8 percent?

A. Correct. Based on Appendix 2.1.

Q. That's a lot of disparity or a lot of room between [redacted] growth rate in CAB's revenues and 13.8 percent growth rate net new PV capacity; would you

agree?

MR. DIXON: Objection, form.

A. We are talking about 2018 to 2019, correct?

Q. (BY MR. FLYNN) Yes.

A. As we have discussed, there are multiple reasons that could potentially explain the discrepancy in the growth rates between CAB sales and net new PV capacity.

Q. That's all those reasons you gave me before; the trackers, the lead times, the retrofit, and the increase in CAB prices. Is that what you're referring to?

A. Yes.

Q. My point, though, is that the growth rate -- the increase in growth rate of CAB's revenues was already in -- exceeding the increase in growth rate in net new PV capacity as of 2018, correct?

A. Yes. According to Dr. Putnam's benchmark.

Q. And then from 2018 -- from 2019, it significantly exceeded even more the growth rate of net new PV capacity?

A. Based on this calculation Dr. Putnam did, yes.

Q. And, again, we've talked about how the growth ratio for the entire period, 2015 to 2023, the growth ratio is [redacted] for CAB's revenues compared to 5.7 for net new PV capacity, correct?

A. Correct. And we also spoke about how commercial

success is a holistic analysis. And even if you have the right benchmark, you will still need to do more to be able to establish commercial success.

Q. Because of all of these other reasons that you've talked about; the trackers, the lead times, the retrofit, and the increases in CAB prices?

A. And the profitability considerations. We don't have evidence that CAB is making profits as the sales grow.

Q. So, again, I'm just asking you, for purposes of my question, to set those other possible contributors aside. And if you agreed that the sales of CAB's products -- particularly beginning in -- transitioning in 2018 and then in 2019, '20, '21, '22, '23, by the time that CAB's integrated grounding system sales were accounting for [redacted] of its sales and the growth factor went up and up and up in excess over the industry benchmark -- would you agree that just because the integrated grounding system included the advantages of integrated grounding system as well as the standard system such that you can't apportion a specific percentage to either one, that you would still be able to determine that each of them had commercial success?

MR. DIXON: Objection, form.

A. I don't see how you can come up with that

1 conclusion. Because not only can Dr. Putnam not identify
2 separately the contribution to excess sales between the
3 '139 and the '551 patent, there are numerous patents that
4 CAB has identified as covering all the components that
5 make up the sales we've been discussing here.
6 Q. (BY MR. FLYNN) If we just isolate the two -- if
7 we just isolate the sale of the standard system from 2015
8 to 2017 that you would have us do -- well, let me back up
9 for a second. Again, I just heard something that you
10 said.
11 So I just want to clarify and confirm that
12 it is your opinion that unless we can determine and assign
13 a particular percentage to each of the standard system and
14 the integrated grounding system, we can't attribute
15 commercial success to either system; is that correct?
16 A. There are numerous layers here. First, for the
17 '551 patent IPR, you need to identify standard system
18 sales separately from integrated system sales because only
19 integrated system sales are alleged to practice the '551
20 patent. Then, another layer of issue here is, even if you
21 can isolate sales of just the integrated systems in the
22 '551 patent IPR, these various components of CAB products,
23 according to CAB, practice numerous patents besides the
24 '551 patent.
25 So Dr. Putnam in this case has attributed

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all the value to the '291 and the '551 patent without even a mention of all other CAB patents. So what he's essentially assuming is that all the other CAB patents, that according to CAB also covers these products, have zero contribution to the sales of CAB products. And he has done nothing to validate that implicit assumption.

Q. So your criticism of Dr. Putnam's analysis and the reason you have rendered an opinion that because he doesn't ascribe a particular percentage to each system and each patent you can't attribute commercial success to either patent, is because he didn't account for the other patents?

MR. DIXON: Objection, form.

A. My opinion is a lot more than that. You -- you keep using the word -- ascribing a certain percentage. What he's -- his assignment is to show that there is a nexus between the sales and the '291 and the '551 patent. My opinion is he cannot -- he has shown an insufficient nexus between the alleged excess sales in the '139 or the '551 patent because, number one, he cannot decompose excess sales between '139 and '551, as he acknowledged.

Secondly, there are multiple contributors to the sales of CAB being excess of the capacity that have nothing to do with the '139 and the '551. He has done nothing to show that all these other contributors have no

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value. He simply assumed that to be the case, which is inappropriate.

Q. So you reject his peanut butter and jelly analogy; is that true?

A. Yes. I -- I described that there is more than that -- more than just peanut butter and jelly. There may be other things -- using ingredients analogy, there may be other things, like honey, granola, and other things that contribute to excess sales.

Q. If we just start at the base, peanut butter, people like peanut butter sandwiches. They've eaten peanut butter sandwiches and they enjoy them, right? That's part of his analogy. That's kind of how -- I'm paraphrasing how he's beginning his analogy. You enjoy a peanut butter sandwich, and so you buy peanut butter sandwiches. And the seller of peanut butter sandwiches is enjoying commercial success because the consumers enjoyed peanut butter sandwiches, right?

A. Right. Except that I have shown in my declaration that peanut butter sandwiches, using his own benchmark, do not achieve commercial success.

Q. We're going to get there in just a minute. But let's just assume peanut butter sandwiches have their own commercial success. Now someone comes up with jelly and adds jelly to the peanut better sandwich to make it a

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1 peanut butter and jelly sandwich, and now the consumers
2 like that even more, correct?
3 A. If you want me to assume that, sure.
4 Q. Yes. And they like that more than if it was
5 just a jelly sandwich, correct?
6 A. If you want me to assume that, I will accept
7 that assumption.
8 Q. So now there's even more commercial success for
9 the seller of the peanut butter and jelly sandwich because
10 now the consumer is enjoying not just the peanut butter,
11 but the peanut and the jelly, still enjoying the benefits
12 of both components, correct?
13 A. Within the peanut butter and jelly sandwich that
14 you are describing.
15 Q. And so as I understand your faulting of
16 Dr. Putnam's analogy in that regard is that, "Well, he
17 doesn't account for other things that you might be able to
18 add to the peanut butter jelly sandwich that could be
19 driving the sales of peanut butter and jelly sandwiches";
20 for example, honey and granola?
21 A. By analogy, what he characterize as a peanut
22 butter and jelly sandwich is not an accurate description
23 of the excess sales within his paperwork. His excess
24 sales includes the contribution potentially coming from
25 numerous other CAB patents besides the '291 and the '551

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patent.

Q. So your rejection of his analogy is based on the possibility that there could be other contributors from these other patents as opposed to just the combination of the integrated grounding and standard system; is that correct?

MR. DIXON: Objection, form.

A. Yes, among all the other things described in my declaration.

Q. (BY MR. FLYNN) You indicated that in your opinion Dr. Putnam has not even established commercial success of the '291 patent -- or I should say of the standard system that practices the '291 patent in the period of time from 2015 to 2017, correct?

A. Yes.

Q. And the reason is because it only -- and that was by his own benchmark, the net new PV capacity, right?

A. Correct.

Q. And the reason is is that because CAB's growth -- I mean the growth rate of CAB's revenues for its standard system from 2015 to 2017 was [redacted] compared to the 24.3 percent industry growth, correct?

A. That is correct.

Q. And that's only a [redacted] excess, which you characterize as marginal?

A. Yes. And I also -- as Dr. Putnam pointed out in his deposition, that's only three data points; 2015, 2016, 2017. And usually economies don't derive a conclusion based on such limited data points. Therefore, such a limited number of data points, hence, in this portion of my declaration that you are referring to, I also discuss the sales trend from 2015 to 2023. So I discuss the sales trend after 2017 as well.

Q. But Dr. Putnam did continue to consider the value of the '291 patent in conjunction with his assessment of the integrated grounding system that incorporated the advantages of both the '551 patent and the '291 patent; did he not?

A. Yes, he did. In this portion of my declaration that you started to ask me questions about related to the standard system.

Q. Yes.

A. And I showed that the standard system, which CAB alleged to be co-extensive with '291 patent, did not achieve commercial success using Dr. Putnam's benchmark.

MR. FLYNN: Take a few minutes.

(Recess from 4:15 p.m. to 4:23 p.m.)

MR. FLYNN: I have no further questions.

MR. DIXON: I have no questions.

(Deposition was concluded at 4:24 p.m.)

CONFIDENTIAL PROTECTIVE ORDER MATERIAL

1 CHANGES AND SIGNATURE

2 WITNESS NAME: MINH DOAN

3 DATE OF DEPOSITION: NOVEMBER 15, 2024

4 PAGE LINE CHANGE REASON

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CONFIDENTIAL PROTECTIVE ORDER MATERIAL

I, MINH DOAN, have read the foregoing deposition and hereby affix my signature that same is true and correct, except as noted herein.

_____
MINH DOAN

THE STATE OF TEXAS)
COUNTY OF _____)

Before me, _____, on this day personally appeared MINH DOAN, known to me (or proved to me under oath or through _____) (description of identity card or other document) to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office, this _____ day of _____, _____.

_____
NOTARY PUBLIC IN AND FOR
THE STATE OF _____

My Commission Expires: _____

_____ No Changes Made ____ Amendment Sheet(s) Attached

CONFIDENTIAL PROTECTIVE ORDER MATERIAL

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

AFFORDABLE WIRE MANAGEMENT, LLC
Petitioner,

VS.

CAMBRIA COUNTY ASSOCIATION FOR
THE BLIND AND HANDICAPPED, INC.,
Patent Owner

IPR 2024-00178
Patent 11,349,291

REPORTER'S CERTIFICATION OF THE
ORAL DEPOSITION OF
MINH DOAN
NOVEMBER 14, 2024

I, Melisa Duncan, a Certified Shorthand Reporter in and for the State of Texas, hereby certify to the following:

That the witness, MINH DOAN, was duly sworn by the officer and that the transcript of the oral deposition is a true record of the testimony given by the witness;

That the original deposition was delivered to EDWARD FLYNN.

That a copy of this certificate was served on all parties and/or the witness shown herein on _____.

I further certify that pursuant to FRCP Rule 30(f)(1) that the signature of the deponent:

__X__ was requested by the deponent or a party

CONFIDENTIAL PROTECTIVE ORDER MATERIAL

before the completion of the deposition and that the signature is to be before any notary public and returned within 30 days from date of receipt of the transcript. If returned, the attached Changes and Signature Page contains any changes and the reasons therefore:

_____ was not requested by the deponent or a party before the completion of the deposition.

I further certify that I am neither counsel for, related to, nor employed by any of the parties or attorneys in the action in which this proceeding was taken, and further that I am not financially or otherwise interested in the outcome of the action.

Certified to by me on this, the 19th day of November, 2024.

Melisa Duncan

Melisa Duncan, CSR, RPR
TX CSR 6135, RPR 836952
Texas Expiration Date: 4/30/26
Firm Registration No. 459
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