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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF UTAH, CENTRAL DIVISION

UNITED STATES OF AMERICA,)
)
Plaintiff,)
)
vs.)
)
RAPOWER-3, LLC, INTERNATIONAL)
AUTOMATED SYSTEMS, INC., LTBl,)
LLC, R. GREGORY SHEPARD,)
NELDON JOHNSON and ROGER)
FREEBORN,)
)
Defendants,)
_____)

Case No. 2:15-CV-828 DN

BEFORE THE HONORABLE DAVID NUFFER

DATE: APRIL 2, 2018

REPORTER'S TRANSCRIPT OF PROCEEDINGS

BENCH TRIAL

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Reporter: REBECCA JANKE, CSR, RMR
(801) 521-7238

10:51:57 1 A. My first opinion is that the IAS solar dish
10:52:06 2 system has not produced any electricity or any other
10:52:10 3 useful form of energy from sunlight.

10:52:13 4 Q. Why do you think that?

10:52:15 5 A. I never saw anything operating. It's a series of
10:52:19 6 components that, once I analyzed them, really don't fit
10:52:24 7 together into a system that will operate efficiently or
10:52:29 8 effectively at all.

10:52:30 9 Q. What, if anything, in the documents or other
10:52:33 10 materials you reviewed suggested that electricity or other
10:52:38 11 usable energy had ever been produced?

10:52:40 12 A. Nothing.

10:52:45 13 Q. In your experience, Dr. Mancini, how would the
10:52:51 14 event of producing power be reflected in the documents of
10:52:57 15 a typical concentrating solar power plant?

10:53:03 16 A. Well, when a plant is commissioned, that's a big
10:53:06 17 deal. Even first production of electricity is a big deal.
10:53:11 18 It would be -- it would be an event of some sort
10:53:14 19 typically.

10:53:14 20 Q. And what, if any, data would you typically see to
10:53:18 21 reflect the production of any power whatsoever?

10:53:22 22 A. Well, it would be a big deal to show power going
10:53:28 23 on the grid, and they would probably report that.

10:53:30 24 Q. Did you see any such documentation in the
10:53:34 25 materials you reviewed?

11:00:45 1 the sun, what happens?

11:00:47 2 A. Well, then the image won't fall at the focal
11:00:50 3 point or at the region where you want it to be, so it
11:00:54 4 won't be on the receivers.

11:01:06 5 Q. At any time on your site visit, Dr. Mancini, did
11:01:09 6 you see any of the collectors automatically tracking the
11:01:15 7 sun?

11:01:16 8 A. No, ma'am. There were only two. On each visit
11:01:19 9 there was one collector moved. During the first visit it
11:01:23 10 moved only in azimuth, and during the second visit they
11:01:27 11 had both an elevation and an azimuth on that collector,
11:01:31 12 but they were both moved manually. I saw none track
11:01:35 13 automatically.

11:01:36 14 THE COURT: When you talk about a collector, are
11:01:38 15 you speaking about a single lens or a group of lenses?

11:01:41 16 THE WITNESS: The group of all four circular
11:01:43 17 ones. This whole unit makes a collector.

11:01:46 18 THE COURT: Okay.

11:01:48 19 THE WITNESS: Yes.

11:01:49 20 MS. HEALY-GALLAGHER: All right. So, assuming
11:01:53 21 that the collector plane were perpendicular to the sun,
11:01:58 22 where would the light and heat from the sun go?

11:02:02 23 A. Well, the receivers would be illuminated,
11:02:07 24 purportedly, and then you'd have to have I-beam throughout
11:02:13 25 the field to supply each receiver, four inlet pipes on

11:35:14 1 me if I'm wrong -- but the power lines that we see on the
11:35:17 2 two poles on the right-hand side of this image just
11:35:20 3 couldn't accept the amount of power that Mr. Johnson is
11:35:24 4 proposing to put on them?

11:35:39 5 A. That's correct.

11:35:43 6 Q. You discussed the need for a substation. Could
11:35:45 7 you talk a little bit more about what a substation is?

11:35:49 8 A. Well, power projects typically produce large
11:35:53 9 amounts of power, so you take that into a local
11:35:56 10 distribution. Now, Mr. Johnson did refer to a substation
11:36:00 11 down the line that he could potentially connect to, but I
11:36:05 12 didn't see any -- any efforts to make that connection or
11:36:08 13 any indication that that had been done.

11:37:14 14 MS. HEALY-GALLAGHER: May I have just one moment
11:37:19 15 Your Honor?

11:37:20 16 THE COURT: Yes.

11:37:38 17 Q. BY MS. HEALY-GALLAGHER: Dr. Mancini, I'd like to
11:37:40 18 move on to the reasons that support your second conclusion
11:37:44 19 in this case. Would you please remind the Court of your
11:37:46 20 second opinion or conclusion in this case?

11:37:50 21 A. It's my opinion that the IAS solar technology
11:37:57 22 will never be a commercial solar energy system producing
11:38:02 23 electrical power or any other form of useful energy.

11:38:04 24 Q. And what are the two primary reasons for that
11:38:08 25 conclusion?

11:38:08 1 A. The two primary reasons are, first of all, the
11:38:13 2 components are just a series of components. They don't
11:38:17 3 really fit together as a system that will -- will make a
11:38:25 4 commercial grade solar energy system. And the second is
11:38:29 5 that the -- probably, one of the major underpinnings for
11:38:34 6 all of my conclusions here are that the resources, both in
11:38:40 7 intellectual capacity in terms of training and background
11:38:46 8 and in terms of sheer numbers of people working on this
11:38:50 9 project are not sufficient to produce or develop a
11:38:55 10 commercial system.

11:39:07 11 Q. All right. Dr. Mancini, let's talk first about
11:39:11 12 resources and people. What kind of staff, Dr. Mancini,
11:39:18 13 does it take to bring a concentrating solar power project
11:39:22 14 to commercial viability?

11:39:25 15 A. Well, you would have numbers of engineers working
11:39:30 16 at the manufacturing facility and technicians. You'd have
11:39:35 17 engineers that are mechanical engineers, that are
11:39:39 18 structural, focused on dynamic structures. You'd have
11:39:43 19 electrical engineers and power engineers. You'd have
11:39:47 20 chemists and metallurgists. You'd have systems engineers
11:39:52 21 helping you make sure that you address issues relating to
11:39:56 22 how the system fits together.

11:39:58 23 Then, if you go to the test site, you'd have to
11:40:00 24 have test engineers testing various pieces of equipment,
11:40:05 25 and you'd have to have people doing the actual

1 dirty. And there were electrical wires lying in pools of
2 water. Fortunately I don't think they were energized at the
3 time. But the side just didn't appear that it was really an
4 active site or had been really used in some time.

13:53:14 5 Q. And how does that compare with other concentrating
6 solar power projects that you've been a part of that have been
7 in testing or research development or operation?

8 A. They're very different. They're very different.

9 Q. How so?

13:53:29 10 A. Well, there's a lot of activity. There's things
11 being tested. You're testing either components because you
12 had to redesign it to make it more manufacturable, so you're
13 testing the new components to see if it's going to operate, if
14 it's going to operate a long time. I didn't see any testing
13:53:47 15 going on at all. There's just -- it just seemed to be a site
16 of inactivity to me.

17 Q. Having seen all of these things that indicate the
18 components, the defendant's components don't work together in
19 a system, what do they mean to you with respect to whether the
13:54:09 20 purported IAS solar energy technology is commercially viable?

21 A. Well, certainly as it's currently represented,
22 it's, in my opinion it will never be a commercial system or
23 will ever produce electricity or any other useable form of
24 energy.

13:54:36 25 MS. HEALY-GALLAGHER: May I take a moment, Your