LARGE FILING SEPERATOR SHEET

CASE NUMBER:

07-829.6A.AIR

07- 830- GA- ALT

01-831- GA-AAM

08-169-6A-ALT

06-1453- GA-UNC

FILE DATE: 7/29/08

SECTION: 1 of 2

NUMBER OF PAGES: \51

DESCRIPTION OF DOCUMENT:

Deposition of William Armstrong





ORIGINAL OF TRANSCRIPT

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

IN THE MATTER OF THE APPLICATION OF THE EAST OHIO GAS COMPANY D/B/A DOMINION EAST OHIO FOR AUTHORITY TO INCREASE RATES FOR ITS GAS DISTRIBUTION SERVICE Case No. 07-829-GA-AIR

MECELVED-SOCKETING LANG 2000 JUL 29 PH 5: 21 PUCO

DEPOSITION OF WILLIAM ARMSTRONG

Taken on Tuesday, June 17, 2008 at 8:33 a.m.

At the law offices of:

Jones Day

North Point Tower

901 Lakeside Avenue

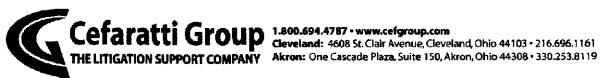
Cleveland, Ohio 44114

Before Nancy Geiger, a Registered Professional Reporter and Notary Public in and for the State of Ohio

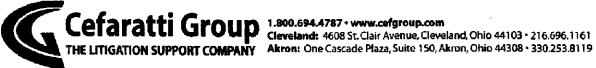


Cefaratti Group 1.800.694.4787 www.cefgroup.com fax: 216.687.0973 Cleveland: 4608 St. Clair Avenue, Cleveland, Ohio 44103 • 216.696.1161 THE LITIGATION SUPPORT COMPANY Akron: One Cascade Plaza, Suite 150, Akron, Ohio 44308 • 330.253.8119

1	APPEARANCES:
2	
3	On behalf of the Office of the Ohio
4	Consumers' Counsel:
5	Office of the Ohio Consumers'
6	Counsel, by
7	LARRY S. SAUER, ESQ.
8	BRUCE HAYES, ESQ.
9	GREGORY J. POULOS, ESQ.
10	(via telephone)
11	10 West Broad Street
12	Suite 1800
13	Columbus, Ohio 43215-3485
14	614-466-8574
15	sauer@occ.state.oh.us
16	On behalf of Dominion East Ohio:
17	Jones Day, by
18	DAVID A. KUTIK, ESQ.
19	North Point Tower
20	901 Lakeside Avenue
21	Cleveland, Ohio 44114
22	216-586-3939
23	dakutik@jonesday.com
24	
25	



		3
1	Jones Day, by	
2	ANDREW J. CAMPBELL, ESQ.	
3	(via telephone)	
4	325 John H. McConnell Boulevard	
5	Suite 600	r
6	Columbus, Ohio 43215	
7	614-469-3939	
8	On behalf of the Attorney General's	
9	Office:	
10	Attorney General's Office	
11	Public Utilities Section, by	
12	STEPHEN REILLY, ESQ.	
13	ANNE HAMMERSTEIN, ESQ.	
14	STEVE PUICIN, ESQ.	
15	BARBARA BOSARD, ESQ.	
16	PETER BAKER, ESQ.	
17	CHARLES LOUTENHIZER, ESQ.	
18	(via telephone)	
19	180 East Broad Street	
20	9th Floor	
21	Columbus, Ohio 43215	
22	614-466-4395	
23	stephen.reilly@puc.state.oh.us	
24	anne.hammerstein@puc.state.oh.us	ļ
25		



1 WILLIAM ARMSTRONG, of lawful age, 2 called for examination, being by me 3 first duly sworn, as hereinafter certified, deposed and said as 5 follows:

> EXAMINATION OF WILLIAM ARMSTRONG BY-MR.SAUER:

Ο. Good morning, Mr. Armstrong. Again, my name is Larry Sauer and I'm with the Office of the Ohio Consumers' Counsel.

Have you had your deposition taken before?

A. Yes.

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Then you're generally familiar with how these things go. you can see, there's a court reporter taking down the questions I ask and the answers that you give. Try to -- this is a little more difficult because we're not in the same room together, so we're trying to do this over the telephone which complicates things a little bit. But I'll try to not talk over you and let you answer your questions fully.

And if you could do so with yes or no answers instead of um-hums on uh-huhs because those are difficult for the court reporter to transcribe and for us to read later when we're going through the deposition.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

If I ask you a question and you don't understand it, just ask me to clarify it. If you answer the question, I'll assume that you understood the question as it was asked. If your counsel objects to a question, you're still required to answer the question unless he specifically instructs you not If you need to take a break, just let me know and we'll take a break. just ask that if there's a question pending that you answer the question and then we'll break. Do you have any questions?

> Α. No.

Then we'll get Okay. started. Are you with Dominion East Ohio?

> Α. No.



1	Q. Who are you with, sir?
2	A. I am with Dominion Virginia
3	Power.
4	Q. Dominion Virginia Power. And
5	are you familiar with the Dominion East
6	Ohio rate case that's pending right now,
7	it's Case Number 07-829-GA-AIR?
8	A. Could you be more specific?
9	Q. Have you filed any testimony
10	in that rate case?
11	A. No.
12	Q. Are you familiar with the
13	company's requests for recovery of costs
14	associated with their advanced meter
15	reading program?
16	A. Could you be more specific
17	please?
18	Q. Are you aware that the
19	company is asking for cost recovery of
20	costs associated with deployment of
21	advanced meter reading devices in their
22	current rate case?
23	A. Yes.
24	Q. Can you explain what the

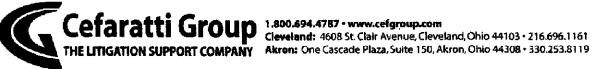


25

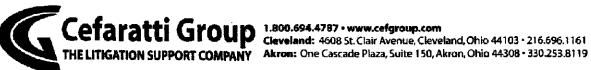
advanced meter reading deployment

1 program is? 2 Can you be more specific? 3 Instead of advanced meter 4 reading, I'm just going to use the term 5 AMR, is that agreeable with you, sir? 6 Α. Yes. But could you repeat 7 the question? 8 Yes. I will do that. 9 MR. KUTIK: When you say 10 advanced, let me just break in here, 11 when you say advanced, do you mean 12 automated? 13 Automated meter reading, yes. Α. 14 ο. And what are the automated 15 meter reading devices, sir? 16 Can you rephrase your 17 question? 18 What is your understanding of 0. 19 what an AMR device is? 20 An AMR device is a device 21 that can be attached in this case to a 22 gas meter that would record the 23 consumption on that meter and through 24 various means relay that information to 25 a collecting unit.

1	Q. And Dominion East Ohio is
2	proposing to install these AMR devices
3	on certain meters in their service
4	territory, are they not?
5	A. Yes.
6	Q. And can you explain the
7	extent to which the DEO is proposing to
8	install these AMR devices in their
9	service territory?
10	A. We are proposing to install
11	a system-wide deployment of AMR devices.
12	Q. And over what period of time
13	have you been involved with DEO's AMR
14	program?
15	A. Since January of 2006.
16	Q. Were you involved in a
17	similar program at Dominion Virginia?
18	A. Yes.
19	Q. And when was that program
20	rolled out?
21	A. That program was rolled out
22	beginning January of 2003.
23	Q. And was that for did that
24	program entail installing AMR devices on
25	gas meters in Dominion Virginia



1	territory?
2	A. No.
3	Q. Did that program just involve
4	installing AMR devices on electric
5	meters in Dominion Virginia territory?
6	A. Yes.
7	Q. And was that a full
8	deployment in Dominion Virginia
9	territory as well?
10	A. No.
11	Q. What was the deployment in
12	Dominion Virginia?
13	A. The deployment in Dominion
14	Virginia was on all but 150,000 electric
15	meters.
16	Q. How many AMR devices were
17	installed in Virginia Dominion
18	territory?
19	A. Approximately 2.2 million.
20	Q. What was it about the
21	150,000 that they didn't install AMR
22	devices that left that group out of the
23	deployment?
24	A. The 150,000 meters not
25	included in that deployment are high-end



1 electric meters typically for our larger 2 The AMR deployment customers. 3 technology utilized for the 2 -approximately 2.2 million customers did 5 not apply, in other words, was not 6 technically feasible for those 150,000 7 customers due to the nature of the 8 electric meter.

Q. Did Dominion Virginia install the same AMR devices on all the 2.2 million customers that were included in the deployment?

MR. KUTIK: You mean the same type?

- Q. The same type, yes.
- A. No.

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

- Q. What were the different types of AMR devices that were installed in Dominion Virginia?
- A. It's basically the same device. There were some devices that had a higher power frequency output to transmit the information, so there were -- I cannot remember the number, but there were a number of higher powered



1 devices installed at specific locations. 2 Did the AMR devices that 3 were installed in Dominion Virginia have the same capability as the AMR devices 4 5 that are being proposed by Dominion East 6 Ohio? 7 MR. KUTIK: Objection. 8 Can you read that question 9 back, please. 10 (Record read.) 11 Α. No. 12 13 14

Can you explain what some of the differences are between the devices that were actually installed in Dominion Virginia Power in comparison to the devices that DEO is proposing to install in this case?

> Yes. Α.

15

16

17

18

19

20

21

22

23

24

25

Please do so.

The main difference, the Α. devices installed at Dominion Virginia Power on electric meters were, excuse me, pardon me -- let me take a drink of water -- the devices installed on Dominion Virginia Power are powered by



the company side of the power going to a customer's premise. The devices deployed and planned to be deployed for Dominion East Ohio are powered by battery. 6 Okay. Do they have the same capabilities, for instance, Dominion Virginia Power, is there just one-way. 8 9 communication ability or is there two way, what would the devices do? MR. KUTIK: Objection. Compound. 12 Could you rephrase the 13 question please? 14 Sure. The AMR devices 15

1

2

3

4

5

7

10

11

16

17

18

19

20

21

22

23

24

25

installed in Dominion Virginia Power do they have two-way communication capabilities?

> No. Α.

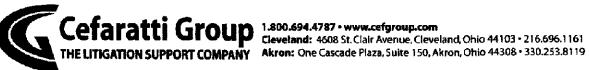
Do the devices proposed to be installed in Dominion East Ohio territory, will those have two-way communication capabilities?

> Α. No.

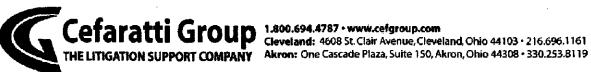
So other than the methods by which the devices are powered, do they



1	have essentially the same capabilities?
2	A. Yes.
3	Q. Are they similarly priced?
4	A. No.
5	MR. KUTIK: Objection.
6	Q. Mr. Armstrong, what's your
7	position with Dominion Virginia Power?
8	A. Manager of metering services.
9	Q. And other than your
10	involvement with the AMR in Ohio and in
11	Virginia, is there anywhere else on the
12	Dominion system where you've been
13	involved in the installation of AMR
14	devices?
15	A. No.
16	Q. And I believe you said in
17	Dominion Virginia territory the roll out
18	for the AMR devices began in January of
19	'03, is that correct?
20	A. Yes.
21	Q. And how long did that
22	deployment take in Virginia?
23	A. Three and a half years.
24	Q. I believe you said your
25	involvement with the Ohio, Dominion East

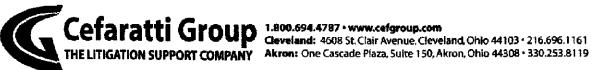


1	Ohio AMR deployment program began in
2	January of '06, is that correct?
3	A. Yes.
4	Q. And have you been involved
5	on a consistent basis throughout the
6	development of the AMR program in Ohio?
7	MR. KUTIK: Objection.
8	A. Could you rephrase the
9	question?
10	Q. What has your involvement
11	been with the AMR program since January
12	of '06?
13	A. My involvement with the AMR
14	program consisted of participating on a
15	team to select the technology,
16	participating on a team to develop the
17	business case and participation on a
18	team to plan the deployment.
19	Q. And would your involvement
20	with the deployment in Ohio, in other
21	words, the participation of the team to
22	select the technology, similar to what
23	you did in Virginia?
24	A. Could you clarify that



question please?

1	Q. When DEO, when Virginia
2	Dominion deployed the AMR devices in
3	their service territory, were you on a
4	team to select the technology?
5	A. Yes.
6	Q. Were you also on a team to
7	develop the business case?
8	A. Yes.
9	Q. And were you also on a plan
0	on a team to plan the deployment in
1	Virginia?
12	A. Yes.
13	Q. Were you involved in Virginia
14	in deployment were there any other
15	areas of involvement in Virginia that
16	you had with the deployment of AMR
17	devices that you didn't have in Ohio?
18	A. Can you please repeat that?
19	MR. SAUER: Can I have the
20	question reread please?
21	(Record read.)
22	A. No.
23	Q. Mr. Armstrong, has DEO used
24	an outside consultant to help with the



25

analysis and program deployment in Ohio?

1		Α.	No.	
2		Q.	Did Dominion Virginia use a	
3	consult	ant	to help with their analysis	
4	or prog	ram	deployment?	
5		Α.	Yes.	
6	L.	Q.	Who was the consultant that	
7	Virgini	a Do	ominion used?	
8		A .	Accenture.	
9		Q.	What was the consultant's	
10	role in	Vir	ginia?	
11		Α.	The consultant's role in	
12	Virgini	a wa	as to assist with the business	
13	case an	d as	ssist with the initial	
14	deploym	ent	plan.	
15		Q.	What was the reason for not	
16	bringin	ıg a	consultant to assist with the	
17	deployn	nent	in Ohio?	
18		Α.	Could you be more specific?	
19	1	Q.	Well, let me ask it this	
20	way. D	id t	he team that you were	
21	partici	pat	ing in in the Virginia	
22	deployr	nent	, was it a team recommendation	
23	to brin	g a	consultant in to assist with	
24	the dep	loyi	ment?	

Α.

No.

1	Q. Was the consultant just part
2	of the team in Virginia from the outset?
3	A. Can you rephrase that?
4	Q. When the Virginia AMR
5	deployment began, were you on the team
6	from the very beginning?
7	A. Yes.
8	Q. And was there a consultant
9	on that team from the very beginning?
10	A. No.
11	Q. So in the Virginia
12	deployment, how did it come to be that
13	a consultant was retained to assist with
14	that deployment?
15	A. Senior management determined
16	that a consultant would add speed and
17	value to the deployment.
18	Q. Were you on the DEO AMR
19	deployment team from the very beginning?
20	A. Yes.
21	Q. And was there discussion to
22	whether or not a consultant was
23	needed for the Ohio deployment?
24	A. No.
25	Q. So based on the lessons

1 learned from the Virginia deployment, 2 was there a determination that a 3 consultant would not add need or value 4 for the Ohio deployment? 5 MR. KUTIK: Objection. 6 Can you rephrase the 7 question? 8 You stated that management in ο. 9 Virginia decided that a consultant would 10 add need or value I believe you said? 11 MR. KUTIK: He actually said 12 speed, 13 Ο. Speed, I'm sorry. Speed and 14 value to the Virginia deployment. 15 the determination made in Ohio that a 16

consultant would not add speed or value to that deployment?

> Α. No.

17

18

19

20

21

22

23

24

- Mr. Armstrong, which -- of the devices that were installed in Virginia, who is the manufacturer of the AMRs?
- Α. The manufacturer of the devices in Virginia was a company called Itron.



1 MR. KUTIK: Spell that for the 2 court reporter. 3 I T R O N, as in Nancy. 4 And Itron is the manufacturer 5 of AMR devices that DEO is considering 6 for Ohio deployment as well? 7 Α. Yes. 8 I'm sorry, Mr. Armstrong, I 9 didn't hear an answer to the last 10 question. 11 MR. KUTIK: He answered. 12 ο. Did you hear the question? 13 MR. KUTIK: He answered yes. 14 Okay. Is DEO considering 15 any other AMR devices for deployment in 16. Ohio other than the Itron? 17 MR. KUTIK: Objection. 18 Α. No. 19 Was that no? Q. 20 Α. That was no. 21 Q. Mr. Armstrong, can you 22 explain how DEO or, yes, DEO utilizes a 23 business case to analyze an investment 24 decision such as the AMR deployment?

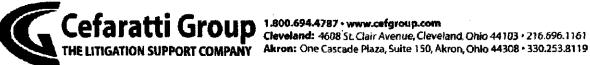


MR. KUTIK:

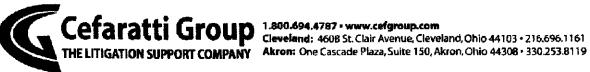
25

Can you read the

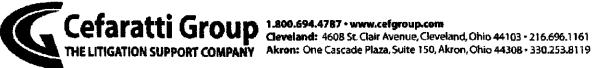
```
1
     question please.
2
             (Record read.)
3
                Can you be more specific
4
     please?
5
                 Sure. You said you
             Ο.
6
     participated in a team to develop the
7
     business case, both in Virginia and
     Ohio, is that correct?
8
9
             Α.
                 Yes.
10
             ο.
                 And what was your involvement
11
     in the development of the -- well, let
12
     me ask you this. Were the business
13
     cases essentially the same between those
14
     two deployments?
15
             MR. KUTIK: Objection.
16
             Α.
                 Can you rephrase the question
17
      or be more specific?
18
                 How did you develop the
19
      business case for the Ohio deployment?
20
                  Could you please be more
              Α.
21
      specific?
22
                  I'm sorry, sir, could you
23
      repeat that?
24
              Α.
                  Could you please be more
25
      specific?
```



	
1	Q. How did you develop the
2	business case for the AMR deployment in
3	Ohio?
4	A. Could you read back that
5	question compared to the previous
6	question?
7	MR. KUTIK: It was the same
8	question, but go ahead.
9	(Record read.)
10	A. Could you be more specific
11	please?
12	Q. Mr. Armstrong, were you
13	involved in the development of the
14	business case for the Ohio deployment?
15	A. Yes.
16	Q. What was your involvement in
17	the development of that business case?
18	A. My involvement on the
19	development of the business case was on
20	the team to look at technology, on a
21	team to look at potential or projected
22	costs and savings, and on a team to
23	look at projected deployment.
24	Q. So your role in this team
25	was part of your role was to develop



- 1	
1	the business case you just said,
2	correct?
3	A. Yes.
4	Q. Can you tell me what is a
5	business case?
6	A. A business case is an
7	analysis of the costs, deployment
8	timeline associated with that, those
9	costs and savings associated with the
10	proposed technology over a timeline with
11	various financial measures applied.
12	Q. Mr. Armstrong, do you have a
13	background in finance?
14	A. Could you be more specific?
15	Q. Do you have a degree in
16	finance?
17	A. No.
18	Q. Do you have a degree in
19	business?
20	A. Yes.
21	Q. And what is that degree,
22	sir?
23	A. Master of Business
24	Administration.
25	Q. So you've taken finance



1 classes? 2 Α. Yes. 3 Can you tell me under what 4 circumstances does Dominion utilize, 5 yes, utilize business case analysis? 6 Could you be more specific? 7 Yes. Is there like a ο. 8 threshold investment that requires the 9 company to undertake a business case 10 analysis? 11 I do not know a specific 12 threshold. 13 Q. You stated that on the team 14 you participated in Virginia you did a 15 business case there, correct? 16 Α. Yes. 17 And was the investment in Ο. 18 Virginia equal to the investment that 19 DEO is proposing for AMR deployment in 20 Ohio? 21 Can you read that question 22 back to me please? 23 (Record read.) 24 Α. No. 25 Was it greater than? Q.

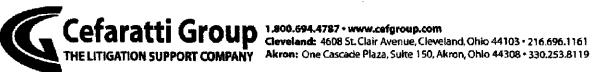


1	A. Can you be more specific
2	please?
3	Q. How much did Dominion
4	Virginia spend on their AMR deployment
5	how much did Dominion Virginia spend
6	on their AMR deployment in Virginia?
7	MR. KUTIK: Is that a
8	confidential piece of information?
9	A. I believe that's a
10	confidential piece of information.
11	MR. KUTIK: All right. So I'll
12	object and instruct you not to answer.
13	Q. The business case that your
14	team prepared for the DEO deployment,
15	was that done internally?
16	A. Can you be more specific?
17	Q. Who prepared the business
18	case analysis for the deployment in
19	Ohio?
20	A. Members of the DEO AMR
21	project team.
22	MR. SAUER: Mr. Kutik, I have
23	sent some documents last evening and
24	then this morning, I sent an
25	application. Did you receive those?

1 I did. MR. KUTIK: 2 MR. SAUER: I wonder if we might 3 have marked as Deposition Exhibit 1 the 4 application in Case Number 5 06-1453-GA-UNC, do you have that 6 document? 7 MR. KUTIK: Yes. While we're 8 doing that, the witness needs to take a 9 personal comfort break so we'll break for a minute or two and we'll get right 10 11 back to you while we're marking the document. 12 13 MR. SAUER: Great. 14 (Recess taken.) 15 16 (Thereupon, Deposition 17 Exhibit-1 was marked for 18 purposes of identification.) 19 20 You've marked as Deposition 21 Exhibit Number 1 the nine page 22 application, do you have that in front 23 of you, Mr. Armstrong? 24 Α. Yes. 25 Okay. Q. Have you seen this

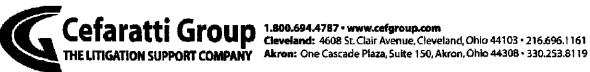


1	document before, sir?
2	A. Yes.
3	Q. Okay. Did you participate
4	in its preparation in any way?
5	A. No.
6	Q. Okay. Could you turn to
7	page 2 of the document please, sir,
8	specifically a provision that's marked
9	as 4A, do you see that, sir, and it
10	states, the AMR provides the most
11	cost-effective way for DEO to comply
12	with the MGSS on a long-term basis, do
13	you see that?
14	A. Yes.
15	Q. Okay. Can you explain what
16	it means by being more cost effective?
17	MR. KUTIK: I'll object as, A,
18	beyond the scope, and B, because this
19	witness, as the witness stated, he has
20	not participated in the preparation of
21	this document.
22	Q. You can answer if you know,
23	sir.
24	A. I don't know.
25	Q. In the development of the



In the development of the

ļ		40
1	business case was the AMR deployment	
2	being cost effective, was that a	
3	criteria in the business case?	
4	MR. KUTIK: Objection.	
5	A. Can you rephrase that	
6	question?	
7	Q. In the development of the	
8	AMR deployment in Ohio, was whether or	
9	not the deployment was cost effective,	
10	was that a factor in the business case	
11	decision?	
12	MR. KUTIK: Objection.	
13	A. Could you please be more	
14	specific?	
15	Q. In the AMR deployment	
16	business case in Ohio, was the cost	
17	effectiveness of that deployment a	
18	consideration?	
19	A. Yes.	
20	Q. And what did cost effective	
21	mean to you?	
22	A. Can you please rephrase that	
23	question?	
24	Q. Yes. I'm just trying to	
25	understand from your perspective as a	



the AMR deployment in Ohio, what did it mean to you -- what does cost effective

- A. Cost effective means that the deployment meets various financial
- And what are those various financial measures that it must meet?
- Net present value, internal rate of return, and payback.
- When you say net present value, can you explain what that term
 - Can you be more specific?
- Well, when you were explaining what cost effective considerations there were, you gave me net present value, internal rate of return, and payback, were there any
- And how does net present Q. value correlate with cost effectiveness?
 - Net present value is an Α.



23

24

analysis where you look at cost versus potential savings over a time period and 3 you -- because implicitly implies money 4 and savings over time, you discount 5 through the net present value analysis 6 to the current state and it provides a 7 dollar figure that in its own right can be used to compare investment 9 alternatives.

1

2

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

So you're saying the net present value analysis allows you to look at various investment options or scenarios and make a decision as to which is most cost effective?

> Α. Yes.

How does the internal rate of return correlate to cost effectiveness?

It is a different financial measure that also can be used to compare investment alternatives.

So the net present value and internal rate of return are tools an entity can use to determine between different investment options the most



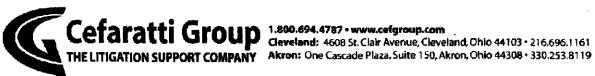
1 cost effective option available, is that fair? 2 3 Α. Yes. 4 And what about the payback 5 analysis you spoke to, how does that correlate to cost effectiveness? 6 7 Payback is a third financial Α. 8 look that can be used to compare 9 competing investments. 10 Q. If I understood what you 11 told me regarding net present value, it 12 was a method of analyzing the costs and 13 benefits and discounting them to -- was 14 it present value, is that what you told 15 me? 16 MR. KUTIK: I think he said 17 current state? 18 The current state? 19 Current state meaning the 20 value of the investment at the moment, 21 today or whenever the analysis is being 22 conducted. 23 ο. And is the internal rate of 24 return, is that a similar type of



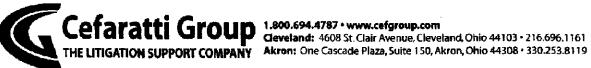
25

analysis of costs and benefits?

1	MR. KUTIK: Objection.
2	A. Could you rephrase the
3	question please?
4	Q. Yes. I'm trying to
5	understand what sort of what the
6	inputs are to the internal rate of
7	return calculation.
8	A. There are various inputs.
9	Q. Cost being one of the
10	inputs?
11	A. Yes.
12	Q. And how about the benefits
13	to be derived by the investment, is that
14	part of the analysis?
15	A. Yes.
16	Q. Is there any other
17	consideration that goes into the
18	internal rate of return analysis?
19	A. No.
20	Q. And the payback analysis, did
21	you say was you take the investment and
22	so you're looking primarily at the
23	cost in that calculation?
24	MR. KUTIK: Objection.
25	A. Could you rephrase the



question please?
Q. Yes. In a payback analysis,
are there is cost one of the
considerations in the calculation?
A. Yes.
Q. And what are the other
considerations that you look at in that
analysis?
A. The annual savings.
Q. And in the AMR deployment in
Ohio, what were the different savings
that were being considered with that
deployment?
A. The savings that were
considered for that deployment were
operational savings due to the
deployment of the AMR technology.
Q. And operational savings would
include meter reading savings?
1
A. Yes.
Q. And associated costs with
Q. And associated costs with



Q.

25

Were there other

1	considerations regarding savings?
2	A. Yes.
3	Q. And what other savings
4	considerations were there?
5	A. There were other savings
6	related to the work of field metering
7	services.
8	Q. What work in field metering
9	services could result in savings by the
0	AMR deployment in Ohio?
11	A. One specifically is a type
12	of work called a re-read order. A
13	re-read order is a customer request for
14	a meter reading that is outside of the
15	normal meter reading cycle.
16	Q. So you're suggesting that by
17	the AMR technology, the meter readings
18	are more accurate and you have less
19	customer requests for re-reads?
20	A. That's one benefit.
21	Q. Are there any other savings
22	items?
23	A. Yes.
24	Q. What would those be?
25	A. On the re-read order, the

- So the savings are associated with the labor involved in accomplishing that re-read, is that correct?
 - Α. Yes.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

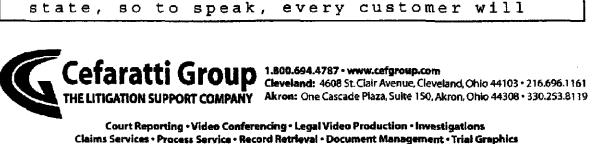
22

23

24

- Any other savings that your team identified and utilized in the payback analysis?
 - Α. Yes.
 - What would those be? ο.
- Savings associated with the Α. Ohio Minimum Gas Service Standards.
- And what were the Ohio ο. Minimum Gas Service Standards that were resulting in cost to the company?
- One in particular would be Α. the requirement to obtain an actual eyeball meter reading on every meter at least one time per year.





receive a meter reading every month, it 2 will be an accurate meter reading, 3 therefore, the number of estimated meters would drop significantly. 5 Inaccurate meter readings and 6 consecutively estimated meters are two 7 sources of calls to our call center. 8 Therefore, by being able to provide an 9 accurate meter reading, a monthly meter reading, and therefore, consecutive estimate reduction, should translate 12 into reduced calls to the call center.

- Q. Any other identified areas where savings could be achieved by the AMR deployment in Ohio?
 - Α. Yes.

1

10

11

13

14

15

16

17

18

19

20

21

22

23

24

25

- What would those be? ο.
- Α. In the current state of what I'll term manual meter reading defined as people meter readers going out daily on meter reading routes to obtain customer meter readings, particularly in the environment of Northern Ohio in the winter, we have experienced slips, trips and falls so to speak and on occasion



meter readers who have been placed in certainly uncomfortable situations, we would dramatically reduce these safety items with deployment of an AMR system.

- Any other areas where your team identified savings that would be associated with the AMR deployment in ohio?
 - No. Α.
- And were these various ο. savings items that you've just listed, were they consistent with the savings that Dominion Virginia realized when they did their deployment of AMR?

MR. KUTIK: Objection.

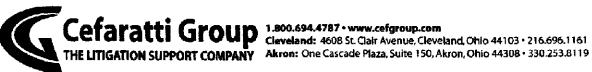
For instance, in Virginia did Dominion Virginia recognize savings in the operational areas that you were discussing, such as meter reading?

MR. KUTIK: Objection.

- Could you rephrase the question?
- Q. In Virginia, in Yes. Dominion Virginia once the deployment was done in 2003 and since 2003, has

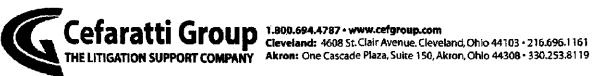


the company recognized savings such as
the operational savings that you spoke
to, the savings in the meter reading
department?
A. Yes.
Q. And so just field metering
services?
A. Yes.
Q. Call center savings, did they
achieve savings in that area?
A. We believe so, but it's
very, very hard to measure specifically.
Q. And in Virginia were there
fewer Workers' Comp or lost time
accidents?
A. Yes.
Q. When you were doing your
business case analysis in Ohio, were you
able to quantify what the expected
savings would be as a result of the AMR
deployment in Ohio?
A. Could you be more specific
please?
Q. Yes. In Ohio as part of the

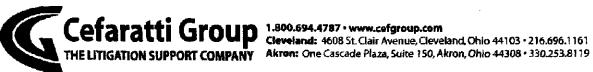


team analyzing the deployment of AMR

1	40
1	devices, did you quantify the savings to
2	be expected associated with reduction in
3	meter reading costs?
4	A. Yes.
5	Q. And do you recall what those
6	savings were anticipated to be?
7	A. No.
8	Q. Were the savings that you
9	quantified used in developing the NPV?
10	A. Yes.
11	Q. The IRR?
12	A. Yes.
13	Q. And payback?
14	A. Yes.
15	Q. And you said that you
16	anticipated savings, I think it was
17	field meter services regarding the
18	re-read issue, were those savings
19	included in your analysis in the NPV?
20	A. Yes.
21	Q. In the IRR?
22	A. Yes.
23	Q. And the payback?
24	A. Yes.
25	Q. And do you recall, if you



1	recall, can you quantify what those
2	savings were?
3	A. No.
4	Q. Okay. You said there were
5	savings, anticipated savings from the
6	Ohio MGSS, do you recall what amount of
7	savings were anticipated there?
8	A. Yes.
9	Q. How much did you anticipate
10	to save in the Ohio MGSS?
11	MR. KUTIK: I'll object. Go
12	ahead.
13	Q. You can answer if you know,
14	sir.
15	A. We had in the business case
16	a range of in the mid \$9 million
17	annually.
18	Q. And that savings item was
19	included in your NPV analysis?
20	A. Yes.
21	Q. And the IRR?
22	A. Yes.
23	Q. And payback?
24	A. Yes.
25	O. Was that the area that you



1 had anticipated the greatest amount of 2 savings? 3 MR. KUTIK: Objection. 4 Could you rephrase the 5 question? 6 Yes. Looking at the 7 different items that you've listed, the 8 operational savings or the field meter 9 services savings or the savings from the 10 Ohio MGSS or the call center savings or 11 the employee incident savings, you've 12 listed several of them, I'm trying to 13 get a sense as whether your team 14 anticipated savings from -- regarding 15 the Ohio MGSS would be the greatest of 16 the savings to be anticipated? 17 MR. KUTIK: I'll object because 18 it assumes that that's a separate item 19 from the other things. 20 If you can answer the question, 21 qo ahead. 22 Can you read the question 23 back to me please? 24 (Record read.) 25 MR. KUTIK: So the question is



would the savings, anticipated savings 2 from the Ohio Minimum Gas Service 3 Standards be greater than any of the other items, is that your question? 5 Counsel? 6 MR. SAUER: Yes. That was the 7 question. 8 9 10 12 13 14 15 16 17

1

11

21

22

23

24

25

MR. KUTIK: Note my objection. The way I would answer this question is going into the business case for AMR, I don't believe we anticipated any specific savings, you know, one versus another or what the magnitude would be. It was only after the analysis then did it reveal itself. Q. And with the hindsight that you have based on the information that 18 came to light through the business case 19 analysis, I was just trying to get a 20 sense as to where the different items

> MR. KUTIK: Well, do you want to ask him a question?

terms of anticipated savings.

that you listed, where the MGSS fell in

You listed several items Q.



1.800,694.4787 • www.cefgroup.com

1.800.694.4707 - www.cergroup.com.
Cleveland: 4608 St. Clair Avenue, Cleveland, Ohio 44103 - 216.696.1161 HELITIGATION SUPPORT COMPANY Akron: One Cascade Plaza, Suite 150, Akron, Ohio 44308 • 330.253.8119

1 regarding the savings, sir, we just kind 2 of ticked them off, operational savings, 3 savings from Ohio MGSS. Let's go on, 4 call center, you identified there were 5 savings, did you include those savings 6 in your NPV analysis? 7 Α. No. 8 Q. And why not? 9 We felt they were too hard 10 to quantify exactly. 11 And what is it about those Ο. 12 savings that made them hard to quantify? 13 Α. We don't have a specific

- accounting mechanism per se to track savings related to AMR in an exact fashion or even in an inexact fashion.
- Does the call center Ο. currently track how many calls they receive?
 - Α. Yes.

14

15

16

17

18

19

20

21

22

23

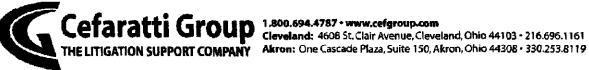
24

25

- ο. Do they track the nature of the calls they receive?
 - Α. I don't know.
- So the fact that meters are 0. being read more accurately, it's only

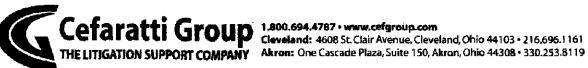


ĵ	45
1	speculation on your part that the call
2	level would go down?
3	A. Yes.
4	Q. Are you not aware or are you
5	aware, let me ask it that way. Are you
6	aware if the call center maintains
7	statistics on calls, the nature of calls
8	that they receive?
9	A. I am not aware.
10	Q. Are you aware that in
11	discovery the company has supplied data
12	regarding call center savings?
13	MR. KUTIK: Objection.
14	Mischaracterizes the documents.
15	You can answer if you know.
16	A. Can you read back the
17	question please?
18	(Record read.)
19	A. Yes.
20	Q. And do you recall what the
21	items identified as savings were?
22	A. Those were estimated savings
23	for the call center.
24	Q. And do you recall



specifically what type of savings were

1	anticipated or estimated?
2	A: Yes.
3	Q. And can you tell me what
4	those were?
5	A. The bottom line saving that
6	I recall was a number of full-time
7	equivalents that equal ten.
8	Q. Did you say, I'm sorry, did
9	you say a full-time equivalent equaling
10	ten?
11	A. The number that I recall was
12	a savings of ten full-time equivalent
13	call center agents.
14	Q. Were these savings identified
15	over a course of time?
16	MR. KUTIK: Objection.
17	A. Could you rephrase the
18	question please?
19	Q. Yes. Did the estimated
20	savings, were those achieved over a
21	number of years?
22	A. I don't know.
23	Q. Were the estimated savings
24	dependent on the investment decision
25	Dominion made regarding the AMR.



deployment?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Α. Could you please be more specific?

Were the savings Yes. estimate that you are speaking to, for example, the full-time equivalent of ten, was that dependent on whether Dominion -- was that based upon Dominion doing the full AMR deployment?

> Α. Yes.

And was Dominion considering ο. other deployment scenarios?

Can you be more specific Α. please?

Besides deployment of AMR devices on every meter, was Dominion considering other deployment scenarios?

> Α. Yes.

And what were some of those Q. scenarios?

Α. One scenario -- well, the full deployment scenario was one. A second scenario involved deployment of AMR devices on inside meters plus on meter reading routes that had 50 percent



1 outside meters. And a third scenario 2 was deployment with a different 3 technology than Itron, called a fixed 4 network. 5 MR. KUTIK: Let's go off the 6 record for a second. 7 (Discussion had off the record.) 8 MR. SAUER: Okay. I was 9 wondering if I might have marked and 10 this may be a good time to go back off 11 the record. 12 MR. KUTIK: Okay. 13 (Discussion had off the record.) 14 15 (Thereupon, Deposition 16 Exhibit-2 was marked for 17 purposes of identification.) 18 19 MR. KUTIK: We have marked as 20 Exhibit 2 a document that starts 21 Dominion, It All Starts Here, and ends 22 on page 18, a document that's labeled 23 Call Center Impact. We should note that 24 this document has been produced under 25 the protective agreement in this case.



My understanding is Staff has agreed to abide by the protective agreement that was reached with Blueridge and any testimony with respect to this document will be deemed confidential pursuant to those agreements.

> Hello. MR. REILLY: Hello.

MR. KUTIK: Yes.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

MR. REILLY: Hello. This is Steve Reilly from Staff, can you hear me?

> MR. KUTIK: Yes.

> MR. SAUER: Yes.

MR. REILLY: Okay. Just a couple of corrections before we go much further here. Anne Hammerstein and I were the ones originally on the call, but since it's been going on, Steve Puicin and Barbara Bosard apparently have come in the room.

Another thing more importantly, on the confidential portion of this, what Staff has always told everybody is that we are bound by statute, those statutes I think everybody on this call



1.800.694.4787 • www.cefgroup.com Cleveland: 4608 St. Clair Avenue, Cleveland, Ohio 44103 • 216.696.1161 HE LITIGATION SUPPORT COMPANY Akron: One Cascade Plaza, Suite 150, Akron, Ohio 44308 • 330.253.8119

1 knows and those are the things that 2 apply with regard to our 3 confidentiality. We haven't seen nor 4 have we agreed to any private documents 5 regarding confidentiality. Our -- that 6 which binds the Staff is laid out by 7 statute and is fairly severe 1f it is 8 breached. That has been acceptable to 9 everybody all along in this case as far 10 as I know and has been acceptable to 11 everybody in every other rate case that 12 I'm aware of or that other people have 13 told me about. 14 Is there some misunderstanding 15 here? 16 MR. KUTIK: My understanding is 17 that you advised our team that you would 18 abide by the provisions of the 19 confidentiality agreement with Blueridge 20 and maintain our documents 21 confidentially --22 MR. REILLY: You have been 23 given --24 MR. KUTIK: Hold on a second. 25 You have been --MR. REILLY:



1 MR. KUTIK: Let me finish. 2 MR. REILLY: I never said that. 3 MR. KUTIK: Let me finish. 4 Subject to your statutory obligations. 5 MR. REILLY: We have said that we would --6 7 MR. KUTIK: All right. 8 MR. REILLY: -- be subject to 9 statutory obligations. Don't let there 10 be any confusion about that. 11 MR. KUTIK: Let's make it easy. 12 We will not let this witness in this 13 deposition testify about confidential 14 information. If the Staff has any 15 qualms about keeping anything 16 confidential, go ahead. 17 MR. REILLY: We have agreed to 18 abide by our procedures with regard to 19 confidential information and that 20 included -- did you mark it 21 confidential, Mr. Whitt, Mr. Murphy, Mr. 22 Campbell are well aware of what those 23 procedures are. 24 MR. KUTIK: I know, I am aware



25

and I thought I stated them correctly.

1 Apparently you have a problem with that. 2 MR. REILLY: I have never seen 3 your confidential agreement nor I've 4 never agreed to it. That's right, I do 5 have a problem with that part of it. 6 That's in addition. What we have said all along to be very clear with 8 everybody, is that the Staff is bound 9 statutorily. Those are the rules that 10 apply to Staff. Dominion is well aware 11 of this. 12 MR. KUTIK: You're not telling me 13 anything I don't know, counselor. 14 MR. REILLY: Okay. Then you 15 mischaracterized what Staff had said 16 because we never said that we will be 17 bound by anybody's private agreement. 18 We have never said that to anyone. 19 MR. KUTIK: Did you not tell Mr. 20 Campbell that, was there not an exchange 21 of e-mails with respect to Mr. Murphy's 22 deposition documents on that subject? 23 MR. REILLY: I'm sorry, what? 24 Regarding what?



MR. KUTIK:

25

That you folks were

going to maintain the document that was qoing to be discussed in Mr. Murphy's deposition, that was going to be maintained as confidential subject to the Staff's statutory obligations.

1

2

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

MR. REILLY: We told him that we would comply with normal procedures, I think we're talking about the same thing, counsel.

> MR. KUTIK: I agree.

MR. REILLY: What we said we would do, just so there's no misunderstanding, is that we are bound, our confidentiality requirements are provided by statute, one.

Two, the Commission's procedure with regard to confidential information, with regard to information that's claimed confidential, if somebody marks something confidential, the Commission holds it as such under its procedures unless -- until there's a request.

At that point the Commission makes a determination under the statute whether it is not -- whether indeed it



1.800.694.4787 • www.cefgroup.com Cleveland: 4608 St. Clair Avenue, Cleveland, Ohio 44103 • 216.696.1161 THE LITIGATION SUPPORT COMPANY Akron: One Cascade Plaza, Suite 150, Akron, Ohio 44308 • 330.253.8119







is confidential.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

It under its current procedures, provides notice to the person or the side requesting confidentiality, that that request has been made. They have ability to seek protective orders or whatever other things they may want to.

MR. KUTIK: Counsel, and that's my understanding of what the agreement --

MR. REILLY: And I also point out --

MR. KUTIK: And that was my understanding of the agreement, so why are we having this discussion? move on.

MR. REILLY: Because I've never seen your agreement and you said we were subject to some agreement we've never seen.

The other things I point out, just so there's no misunderstanding on this and I don't expect it to ever be a problem is the Commission will always These are apply its current procedures.



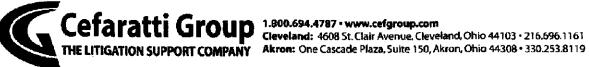
1 the current procedures that I have 2 outlined to you. Now I don't think it 3 should be a problem. It's never been a 4 problem in the past, but I don't want 5 there to be any mistakes about it. 6 MR. KUTIK: There aren't any 7 mistakes, counsel. 8 MR. REILLY: Okay. Then we're 9 fine. 10 MR. KUTIK: All right. Let's 11 proceed then. 12 MR. REILLY: Okay. 13 MR. SAUER: Mr. Kutik? 14 MR. KUTIK: Yes. 15 MR. SAUER: Do you suggest we 16 proceed under seal from this point 17 forward given the confidential nature of 18 the information within this document? 19 MR. KUTIK: Yes. That's why I 20 believe at this point to the extent 21 you're going to have discussions about 22 this document, that we would treat this 23 portion of the deposition going forward 24 as confidential. And if the deposition



25

is going to be submitted to the

1	Commission that we would do it under
2	seal pursuant to the agreement that we
3	have with you.
4	MR. SAUER: Correct. I think
5	that's reasonable. Let's move forward
6	then.
7	Q. Mr. Armstrong, do you have a
8	copy of what's been marked previously as
9	Deposition Exhibit Number 2?
10	A. Yes.
11	Q. I'm sorry, I didn't hear
12	your answer, did you say you have seen
13	this document before?
14	A. Yes.
15	Q. Okay. Can you tell me what
16	this document is?
17	A. It's a PowerPoint
18	presentation.
19	Q. Okay. How is it you're
20	familiar with this document, sir?
21	A. I didn't hear that question?
22	Q. How is it that you are
23	familiar with this document?
24	A. I have seen it before.
25	O. Do you know who prepared



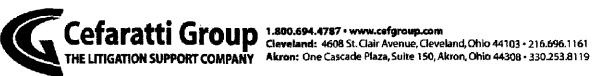


Q.

25

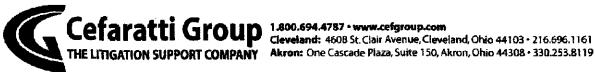
And Bob Metzinger?

1	A. Bob Metzinger is a manager
2	of field metering services for Dominion
3	East Ohio.
4	Q. And David Batson?
5	A. David Batson is a senior
6	business performance analyst for
7	Dominion Virginia Power.
8	Q. How about Rod Holmes?
9	A. Rod Holmes is the supervisor
10	for meter engineering and planning for
11	Dominion East Ohio.
12	Q. Supervisor of meter, did you
13	say planning?
14	A. Supervisor of meter
15	engineering and planning for Dominion
16	East Ohio.
17	Q. Okay. And Abby Corbin?
18	A. Abby Corbin is manager of
19	financial services for Dominion
20	Services.
21	Q. And Ken I'm not sure
22	Opipery, is that a correct
23	pronunciation?
24	A. You've got it correct. Ken
25	Opipery, I am not sure of his exact



areas of the company that we could reach out and touch and get information needed for the business case.

- And Brett Crable who is on the adhoc list, what's his position?
- At that time or at this time Α. of this document, he was the director of



20

21

22

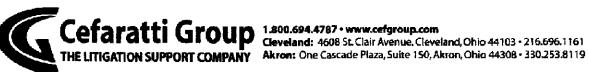
23

24

25

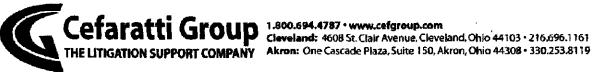
THE LITIGATION SUPPORT COMPANY Akron: One Cascade Plaza, Suite 150, Akron, Ohio 44308 • 330.253.8119

	60
1	credit for Dominion Virginia Power and
2	for Dominion East Ohio.
3	Q. Did Mr. Crable serve in a
4	similar adhoc role on the Dominion
5	Virginia AMR deployment?
6	A. I'm trying to remember back
7	that far, I believe it was him.
8	Q. Okay.
9	A. There's a lot of movement of
10	folks.
11	Q. I understand. Gwen Beadles,
12	what was her role?
13	A. At the time of this document
14	she was director of billing for Dominion
15	Virginia Power and Dominion East Ohio.
16	Q. And again, did she play a
17	similar adhoc role for your Dominion
18	Virginia AMR deployment team?
19	A. Yes.
20	Q. And Ella Hochstetler, what
21	was her position?
22	A. Ella was our adhoc member
23	representing the Dominion call centers.
24	Q. And again, did she play a



similar adhoc role for your Dominion

	· ·
1	Virginia AMR deployment team?
2	A. No.
3	Q. And when was that business
4	case team formed, sir?
5	A. This case team was formed in
6	early 2006.
7	Q. And were you the team
8	leader?
9	A. Yes.
10	Q. And did you have any
11	particular role in particular as a team
12	leader, any particular responsibilities
13	I should say?
14	A. Could you be more specific?
15	Q. Did you have any
16	responsibilities on this team in
17	addition to or different from scratch
18	that.
19	Did you have any responsibilities
20	different from the other team members
21	because you were the team leader?
22	A. Yes.
23	Q. And what were those
24	additional responsibilities you had?
25	A. Well, as team leader, I



24

25

scheduled, arranged for and scheduled meetings of the team, managed overall work assignments. And by manage meaning through general management practices ensured that the various members of the team were working towards conclusion of their particular pieces. And it would be my responsibility to make sure that our effort to develop the business case scenarios was done in a timely fashion per management's direction.

- Did you have a specific deadline in which the business case had to be completed?
- Not specifically that I can recall.
- Did the team report to upper management?
 - Α. Yes.
- And who in Dominion, Dominion East Ohio's upper management did the team report to?
- There was a steering Α. committee that we reported to.
 - And who was on the steering Q.



committee, sir?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

A. Richard Walden, who was director of metering services. Jeff Murphy, Carrie Fanelly, Brett Crable, Gwen Beadles, Mike Reed. That's it.

- Q. Can you tell me what Carrie Fanelly's position is or was at the time? Is it a -- is that a male or a female, Carrie?
- Carrie Fanelly's position at the time of this document was director of call centers for both Dominion Virginia Power and Dominion East Ohio. Carrie Fanelly is a female.
- Okay. I think you told me who Brett Crable and Gwen Beadles were. Mike Reed, what is Mike's position?
- At the time of the document, Mike Reed was director of -- I'm not sure of the exact title, but director of field metering services.
- Is Mr. Reed in that position for Dominion East Ohio only?
 - Α. Yes.
 - And is your business case



1 team still meeting? 2 Α. No. 3 When did the team disband? 4 Sometime during the first 5 quarter of 2007. 6 And between early 2006 when 7 you said the team was formed and the 8 first quarter of 2007, how many times 9 would you say your team met with the 10 steering committee? 11 I cannot remember exactly. Α. 12 Ο. Was it on a set schedule? 13 Α. No. 14 Q. Do you know when this 15 particular document was prepared? 16 MR. KUTIK: Well, counsel, I'll 17 note that I think there was -- on the 18 electronic version, I think there's a 19 date that does not show up on the 20 printed version, so I don't know if you 21 have the electronic version available to 22 you, but we do not. 23 I don't here, but I MR. SAUER: 24 do recall that that was the case. 25 MR. KUTIK: But if the witness



23

24

25

Α.	Yes.	I	believe	it	was	March
5 .						·

- Q. And I think that would be consistent with the date Mr. Kutik was referring to. Did the team -- was this the only such document that the team provided to -- let me ask you this. Scratch that. Was this document presented to the steering committee?
 - Yes.
- And was it presented to the steering committee in March of '06?
 - Yes.
- And what did the steering committee do with the information the team provided in March of '06?
 - I don't know.
- Did the steering committee give the team any instructions after meeting with the team in March of '06 and being presented this information?
 - Could you be more specific? Α.
- Following the meeting in March of '06 where this information was



presented, did the steering committee give the team any instructions?

- A. On the day of the meeting with the steering committee where this information was presented, the steering committee did not receive any instructions from the steering committee.
- Q. Well, not necessarily the day of the meeting, but after the steering committee had time to look at it, review it and make any decisions, were there any instructions that came back from the steering committee following -- subsequent to being presented with this information?
- A. Just that the steering committee was going to present relevant information to senior management.
- Q. And do you know when that meeting with senior management took place?
 - A. No, I do not.
- Q. Were you or any members of your team present when that meeting with



We were informed -- I'm jumping ahead a little bit, but we were informed that the aggressive business case scenarios were not going to be included.

When you say aggressive business case scenarios, can you describe for me what made them aggressive?

What made the three business -- basically there are three business

16

17

18

19

20

21

22

23

24

25

1 cases. And what made them aggressive, 2 we ran in essence a sensitivity analysis 3 that assumed whatever the particular 4 business case item was most favorable 5 whether it was price, or installation 6 time, et cetera. So in other words, it 7 would be like if everything fell exactly 8 into a dream case scenario on every 9 aggressive item, what that business case 10 would look like. 11 ο. Was there a team leader so 12 to speak of the steering committee? 13 Α. No. 14 15 16

And was the document that's been marked as Deposition Exhibit 2, is it the only document that was provided to the steering committee by your business case team?

> Α. No.

17

18

19

20

21

22

23

24

25

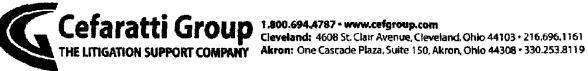
What else was provided to the steering committee?

Α. We provided the steering committee a monthly update on our progress.

> Q. And did you prepare that



1	monthly update?
2	A. It was often done verbally.
3	Q. And did you do that in
4	conjunction with the entire team or did
5	you do that by yourself?
6	A. As the team leader, I would
7	gather input from the appropriate
8	members of the team to provide that.
9	Q. And did you provide that
10	information to the entire steering
1 1	committee or to components of the
12	steering committee?
13	A. I provided it to components
14	of the steering committee.
15	Q. And what would be the
16	typical subset of the steering committee
17	that you would make your monthly updates
18	on progress?
19	A. To Mr. Richard Walden who
20	was my direct boss.
21	Q. Did you present anything else
22	to the steering committee other than the
23	monthly updates on progress?
24	A. No.
25	MR. KUTIK: We need to take



Court Reporting • Video Conferencing • Legal Video Production • Investigations Claims Services • Process Service • Record Retrieval • Document Management • Trial Graphics





another break so let's just do that. 1 2 MR. SAUER: Okay. This is a 3 good time. (Recess taken.) 5 Mr. Armstrong, were there any Ο. 6 other documents that you recall 7 providing to the steering committee from 8 your business case team? 9 Α. No. 10 And what's been marked as Ο. 1**1** Deposition Exhibit 2, is this the final 12 draft of what was presented to the 13 steering committee? 14 Δ. Yes. So whatever information the 15 16 steering committee had for the executive 17 management, it was derived from 18 information that was contained in this 19 document? 20 I don't know. 21 If it was information that 22 the steering committee would have had 23 from your business case team, it would 24 have been from this document, is that



correct?

25

Į	
1	A. Yes.
2	Q. Can you turn to page 2 of
3	that document, sir, it's numbered as
4	page 2, it says, Business Case - What
5	Has Changed, do you see that?
6	A. Yes.
7	Q. Can you tell me what
8	analysis was done prior to the
9	preparation of this document?
10	MR. KUTIK: Objection.
11	A. Could you rephrase the
12	question?
13	Q. In the title of this
14	document it says, What has changed,
15	changed from what?
16	A. There were two additional
17	scenarios run previous to this document.
18	MR. SAUER: I'm sorry, can I
19	have that answer reread please?
20	(Record read.)
21	Q. And what were those
22	scenarios, sir?
23	A. One scenario was to deploy
24	AMR on premises or meters that have a

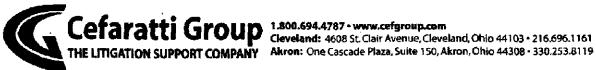
current device called a Badger or

American Read-O-Matic device. The second scenario was a scenario that included moving all current inside meters to the outside of the premise and then deploying AMR full deployment.

- Q. So under the first scenario you were describing deploying AMR on premises or meters that have a Badger or American Read-O-Matic device, how many AMR devices would have been deployed under that scenario?
 - A. I can't remember exactly.
- Q. Do you have just an approximation as to the percentage compared to full deployment?
- A. My best guess is approximately 50 to 100,000 premises with Badger or Read-O-Matic devices.
- Q. And then the second involved moving all current meters that were inside to the outside and then full deployment of AMR, is this what you said?
 - A. Yes.
 - Q. And did you do a full



1	business case analysis on those two
2	scenarios?
3	MR. KUTIK: Objection.
4	A. Could you rephrase the
5	question?
6	Q. Yes. Did you do a similar
7	business case analysis on those two
8	scenarios as you've done within this
9	document?
10	A. No.
11	Q. Did you present these two
12	scenarios to the steering committee?
13	A. No.
14	Q. Were those two scenarios that
15	were well, let me ask you this. How
16	did you arrive at the two scenarios that
17	you mentioned?
18	A. Could you clarify the
19	question please?
20	Q. Yes. How did the team come
21	to review the scenarios that you just
22	identified, one, being deploying the AMR
23	on premises or meters that have a Badger
24	or American Read-O-Matic device as being
25	one scenario and the second scenario



25

moving all inside meters outside and then full deployment of the AMR devices?

In analyzing our distribution system, we could break the analysis down into logical subsets. The deployment to the Badger, Read-O-Matics only was a logical subset. Moving meters, moving the inside meters outside was also a logical subset scenario.

And if you'd move the inside meters outside were the AMR devices necessary anymore in order to comply with the Ohio MGSS rules?

Could you rephrase the Α. question please?

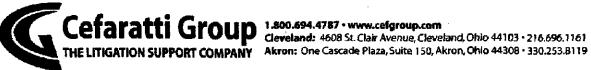
Under the scenario number two you were talking about, moving all current meters from the inside to the outside, would DEO then be able to comply with Ohio MGSS without deployment of AMR devices?

> Α. Yes.

So when were these two scenarios that your team was initially thinking about, when did those first

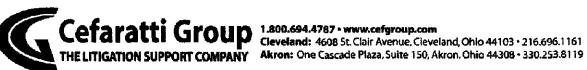


1	come to light?
2	MR. KUTIK: I'm sorry, what
3	scenarios are we talking about?
4	Q. The first one being the
5	deployment of AMR on premises, on meters
6	that have a Badger or American
7	Read-O-Matic device and the second
8	scenario being moving all current meters
9	from the inside to the outside and then
10	full AMR deployment, when were those two
11	scenarios first being considered by the
12	team?
13	A. In the period of January of
14	2006 up to no later than this
15	presentation.
16	Q. And I was going to say when
17	were they rejected?
18	A. I cannot remember.
19	Q. Do you remember how they
20	were rejected?
21	A. Yes.
22	Q. How did it come that they
23	were rejected?
24	A. The installation of AMR on
25	just the Badger and American





1	Read-O-Matic devices for those, what I
2	can recall 50,000 to 100,000 meters,
3	would be such a small slice of the pie
4	and still not have us comply fully with
5	the Ohio Minimum Gas Service Standards,
6	we rejected that. The scenario where
7	moving all meters outside and then
8	deploying AMR was viewed as too costly.
9	Q. And when you say the
10	scenario of moving all inside meters to
11	the outside was too costly, was that
12	after performing a net present value
13	analysis?
14	A. No.
15	Q. After performing an IRR
16	analysis?
17	A. No.
18	Q. Looking at the payback?
19	A. No.
20	Q. How was the decision made
21	that it was too costly?
22	A. The estimated cost to deploy
23	that option was much higher than the
24	three scenarios that we forwarded on.
25	MR. KUTIK: Let's go off the



1 record for a second. 2 MR. SAUER: Okay. 3 (Discussion had off the record.) 4 Mr. Armstrong, we were just discussing a couple of different 5 6 scenarios that your team decided not to 7 go forward with, how was the decision 8 not to go forward, who made that 9 decision? 10 The AMR business case team 11 by consensus. 12 And is that typically how ο. 13 decisions were made, were they put to a 14 vote or as team leader, if it was a 4-4 15 tie, did you have -- did you break the 16 tie? 17 MR. KUTIK: Objection. 18 Could you clarify the **Q** . 19 question? 20 Α. Yes. 21 I'm just trying to understand 22 how the decisions were made, you said it 23 was by consensus, does that mean you put 24 these type of decisions to a vote by 25



the team?

1	A. No.
2	Q. How did you decide what was
3	a consensus?
4	A. Different points of views
5	were expressed and debated and then
6	decided upon or agreed to.
7	Q. Not necessarily unanimous
8	decisions?
9	MR. KUTIK: Objection.
10	A. Can you clarify the question?
11	Q. Well, I'm just trying to
12	understand how the dynamics of the team
13	decision making was working, I mean, you
14	said you didn't put it to a vote, so
15	how exactly did these decisions get
16	made?
17	A. By consensus.
18	Q. And I'm asking, what does by
19	consensus mean?
20	A. Consensus means that points
21	of view were allowed to be expressed.
22	During that point of view discussion
23	oftentimes various members of the team
24	were would, excuse me, possibly see

the point in a different light with

2

3

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25



The decision not to go forward with the two scenarios we were talking about earlier, the deployment of AMR on premises where the Badger or American Read-O-Matic devices were located or moving all current meters to the -- inside meters to the outside, did you agree with those decisions?

> Α. Yes.

Ο. And was there different points of view on the team as to whether or not those scenarios should qo forward?

> Α. No.

The team agreed in totality that those scenarios should not be pursued?

A. Yes.

Q. Okay. Besides the two scenarios we were talking about here, are there any other scenarios that the team contemplated that aren't described within this document itself?

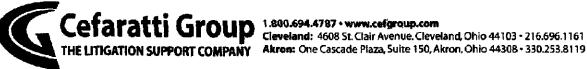
> Α. No.



1.800.694.4787 • www.cefgroup.com Cleveland: 4608 St. Clair Avenue, Cleveland, Ohio 44103 • 216.696.1161 HE LITIGATION SUPPORT COMPANY Akron: One Cascade Plaza, Suite 150, Akron, Ohio 44308 • 330.253.8119

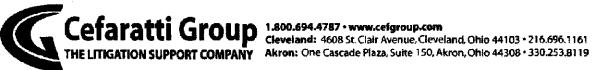


1	Q. On page 2 right below the
2	title of this, there's something about
3	added fixed network technology solutions
4	scenario, can you tell me what that
5	means?
6	A. Yes.
7	Q. What is that?
8	A. Fixed network technology is
9	an AMR technology where the device that
10	reads the meters would be on a elevated
11	structure of some sort that would be
12	able to read all the meters in an
13	approximate radius surrounding that
14	elevated structure collector device.
15	Q. And was this fixed network
16	technology added to all the different
17	scenarios within the business case in
18	this document?
19	A. No.
20	Q. Is the fixed network
21	technology solution included in the
22	scenario the company is proposing to go
23	forward with?
24	A. I'm sorry, could read that



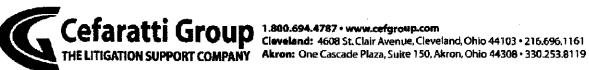
one back to me, that question.

1	(Record read.)
2	A. The answer to that is no.
3	Q. So what was the technology,
4	which scenario was it added to?
5	A. Could you clarify that
6	question please?
7	Q. On this page 2 the bullet
8	point says, Added fixed network
9	technology solution scenario, added to
10	what?
11	A. Added to the array of
12	scenarios.
13	Q. And then this was rejected,
14	is that what you're telling me?
15	A. Could you rephrase the
16	question?
17	Q. I thought I asked you the
18	question of whether or not this fixed
19	network technology is included in any of
20	the scenarios within this document and I
21	thought you had said no?
22	MR. KUTIK: No. That
23	mischaracterizes his testimony. What he
24	said no to was that it was not part of
25	the scenarios or the scenario that's



the scenarios or the scenario that's

1	been proposed by the company.
2	Q. All right. Within this
3	document there are various scenarios
4	that your business team analyzed, is
5	that correct?
6	A. Yes.
7	Q. Within any of those scenarios
8	is the fixed network technology
9	included?
10	A. Yes.
11	Q. Okay. Which of those
12	scenarios is the fixed network
13	technology included in?
14	A. The scenario of partial
15	deployment, all inside meters, plus a
16	111,000 outside meters.
17	Q. And what was the determining
18	factor in deciding which scenarios to
19	include the fixed network technology
20	solution in?
21	A. Rephrase please.
22	Q. How did your team come to
23	determine which scenarios to add the
24	fixed network technology to?



Α.

The fixed network scenario

was added to the inside meter, the partial deployment scenario based upon this technology applying to that subset of the distribution system.

What do you mean by the technology applying to that subset of

A. We considered the fixed network for the partial deployment that's listed as all 560,000 inside meter locations plus the 111,000 outside meter locations, we considered the fixed network for that scenario.

And I thought your previous answer had said something about its application of the technology to that scenario, did I misinterpret something you said?

> Could you clarify please? Α.

MR. SAUER: I wonder if you could reread the answer, not previous but the one before that.

MR. KUTIK: Well, let's do that, but I think we need to be breaking so.

(Record read.)



18

19

20

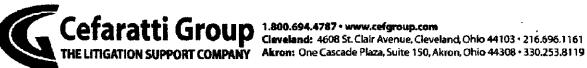
21

22

23

24

1	Q. And my follow-up question was
2	what did you mean by that technology
3	applied to the subset to that subset
4	of the distribution system?
5	MR. KUTIK: Objection. Asked and
6	answered. Go ahead.
7	A. What I mean by that is that
8	technology would that technology
9	would work for that scenario.
10	Q. And when you say work, in a
11	operational sense it would work?
12	A. Yes.
13	Q. And not work in a cost
14	effective sense of the word?
15	MR. KUTIK: Objection.
16	A. Could you clarify that last
17	question?
18	Q. Yes. I was trying to
19	determine whether the decision as to
20	where to deploy the fixed network
21	technology was a cost-based decision?
22	A. Yes.
23	Q. So there's a couple of
24	components to how your team arrived at
25	where to put the fixed network



1 technology or where it best fit, one 2 being from an operational standpoint it 3 worked best in that partial deployment 4 scenario, you agree with that? 5 Α. No. 6 MR. KUTIK: Well, at this point 7 we do really need to break. 8 MR. SAUER: Okay. Let's take a 9 break and resume at 1:30. 10 (Recess taken at 11:19 a.m.) 11 MR. SAUER: Go back on the 12 record. 13 Q. All right. Mr. Armstrong, 14 earlier this morning we were asking you. 15 some questions about the benefits of the 16 AMR program or the AMR deployment that 17 you included in your business case, do 18 you recall that discussion? 19 Α. Yes. 20 And with regard to potential 21 benefits of the AMR, did DEO consider 22 the possibility of benefits arising from 23 the reduction in fraud or theft or meter 24 tampering, those kind of items?



Α.

No.

25



Cleveland: 4608 St. Clair Avenue, Cleveland, Ohio 44103 • 216.696.1161

HE LITIGATION SUPPORT COMPANY

Akron: One Cascade Plaza, Suite 150, Akron, Ohio 44308 • 330.253.8119



1	Q. Did Dominion Virginia
2	experience any reduction in costs
3	associated with fraud or theft or meter
4	tampering as a result of their AMR
5	deployment?
6	A. Could you be more specific
7	please?
8	Q. Does Dominion Virginia
9	experience any problems that you're
10	aware of with theft of service or meter
11	tampering or those kind of items?
12	A. Yes.
13	Q. And once Dominion Virginia
14	implemented or deployed the AMRs in
15	their service territory, was there a
16	reduction in cost associated with theft
17	or meter tampering?
18	A. I don't know.
19	MS. HAMMERSTEIN: Hello, this is
20	Anne Hammerstein. I've joined the call.
21	MR. SAUER: Hi, Anne, we were
22	just getting started.
23	MS. HAMMERSTEIN: Thank you,
24	Larry.
25	Q. Mr. Armstrong, remember this



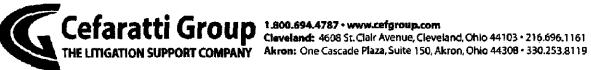
Α.

Yes.



And can you kind of explain

		7
1	what those impediments are?	
2	A. Yes.	
3	Q. What might those be?	
4	A. Because a meter is designated	
5	as outside does not equate to that it	
6	is accessible for manual meter reading	
7	purposes.	
8	Q. Can you explain what would	
9	create a situation where an outside	-
10	meter is not accessible to a meter	
11	reader?	
12	A. Yes.	
13	Q. Please do so.	
14	A. For example, a typical	
15	example would be a row of either	
16	condominiums or townhouses that might	
17	have the meter outside but located at	
18	the rear of the property building wall.	
19	And each one of those townhouse/condo	
20	properties have fences around the	
21	perimeter of each of their lot parcels	
22	that are that separate one from	
23	another and are behind locked gates.	
24	Q. Is that a prevalent problem?	
25	MR. KUTIK: Objection.	



1	A. Could you be more specific?
2	Q. How much of a problem is
3	that, can you quantify it?
4	A. No.
5	Q. Is that the only example
6	that you can identify where an outside
7	meter is not accessible to a meter
8	reader?
9	A. A similar occurrence would be
0	on an apartment complex again where the
11	meters are outside but they are what's
12	termed as banked, in other words,
13	they're meters that are side by side by
14	side at, for instance, one end of the
15	complex and the apartment owner has,
16	again, enclosed those by a security
17	fence or a fence that would, again,
18	limit access for the meter reading.
19	Q. Were you able to quantify
20	what the estimated cost savings would be
21	by the deployment of AMR devices to
22	outside meters?
23	A. No.
24	Q. Are the impediments that

you've described, were they deemed

22

23

24

25

sufficient to justify deploying the AMR to all outside meters?

MR. KUTIK: Objection.

Can you rephrase the question please?

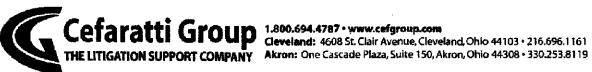
You've stated that Yes. ο. there are impediments in attempting to read outside meters that make compliance with the Ohio Minimum Gas Service Standards problematic, such as apartments or condos putting up a security fence or in a manner blocking the meter reader from access to those. In looking at your business case, were those impediments deemed sufficient to deploy AMR to all outside meters?

MR. KUTIK: Objection. Assumes that that analysis was done. Go ahead.

That analysis was not Α. conducted.

Mr. Armstrong, you indicated that there are cost savings by the deployment of AMR associated with DEO's compliance with Ohio Minimum Gas Service Standards, correct?

1	A. Yes.
2	Q. Do those costs do those
3	estimated cost savings include savings
4	associated with DEO's deployment of AMRs
5	to outside meters?
6	A. Can you please rephrase?
7	Q. The estimated cost savings by
8	deploying the by deploying AMR
9	associated with compliance with Minimum
0	Gas Service Standards, can you tell me
1	what makes up your estimate of those
2	cost savings?
13	A. Yes.
14	Q. What are the components of
15	the cost savings, please?
16	A. The cost savings derived
17	well, the avoided costs from having to
18	gain access to limited access meter
19	locations. The that's it.
20	Q. And are those avoided costs
21	broken down by how much of that
22	pertained to outside meters versus
23	inside meters?
24	A. No.

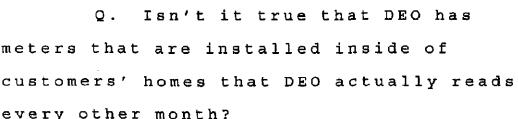


Q.

25

How were those cost estimates

derived? Let me ask you another question. Let's try this. Would the cost savings associated with compliance with Minimum Gas Service Standards, would you expect those to be the same for inside meters versus outside meters? I would expect them to be Α. the same for inside meters and outside 8 9 meters knowing that the accessibility of particular outside meters and inside meters are essentially the same. Ο. Are there impediments to 13 reading all the inside meters? Α. Can you be more specific? 15 16



- Α. Yes.
- And for those meter locations there are no impediments for reading those meters?
 - MR. KUTIK: Objection.
- Can you rephrase the Α.

25 question?

1

2

3

4

5

6

7

10

11

12

14

17

18

19

20

21

22

23



1

3

4 5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

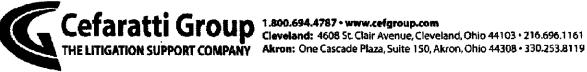
You had previously answered Q. that on DEO's system there are inside meter locations that DEO is able to read every other month, and my question was in those situations, there are no impediments to reading those meters, correct?

MR. KUTIK: I'll object because the question doesn't state over what period of time we're talking about reading meters. You're talking about, for example, reading meters every month, are you talking about reading meters every other month, once a year?

- The question was just surrounding the reading of meters every other month, is that DEO's normal meter reading practice, Mr. Armstrong, that meters are read every other month?
- Currently DEO's practice is to read all meters every other month.
- Ο. And with those meters that happen to be located inside that DEO is able to receive -- to actually gather actual reads, there is no impediment to



1	reading those meters then, is there?
2	MR. KUTIK: Objection.
3	A. Is there any way you can
4	restate or rephrase that question
5	please?
6	Q. What do you consider to be
7	an impediment to reading the inside
8	meters?
9	A. Accessibility.
10	Q. And for the meters that are
11	located inside the DEO is able to get
12	access to every other month, is that
13	because, one, the customer's at home,
14	may that be one reason how you get
15	access?
16	A. That's one reason how we
17	gain access.
18	Q. Another way does Dominion
19	have a key to some of the locations
20	where the meters are located inside?
21	A. Dominion has keys to some
- 22	locations to gain access.
23	Q. Are there other ways that
24	Dominion has access to these inside



meters other than that?

25

Claims Services - Process Service - Record Retrieval - Document Management - Trial Graphics



A. No.

Q. So if I understand what you told me, the business case that you've prepared and is contained in the document that was marked as Deposition Exhibit Number 2, the cost savings associated with installing or deploying the AMR that would be achieved complying with the Ohio Minimum Gas Service Standards did not differentiate between cost savings associated with inside versus outside meters, is that true?

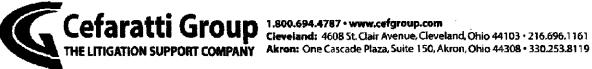
MR. KUTIK: Objection. Misstates

- A. Can you rephrase the question please?
- Q. Your business case you have identified and estimated there to be savings associated with compliance with the Ohio MGSS because of the deployment of AMR technology, is that correct?
 - A. Yes.
- Q. Do those estimated savings contain -- do those estimated savings assume savings associated with inside



his testimony.

	·
1	and outside meters?
2	A. Yes.
3	Q. Was there any attempt when
4	quantifying those savings estimates to
5	differentiate between inside and outside
6	meters?
7	MR. KUTIK: You mean to break it
8	down?
9	MR. SAUER: Yes.
10	MR. KUTIK: Okay. Objection.
11	Asked and answered. Go ahead.
12	A. No.
13	Q. All right. Could you turn
14	to page 9 of the document that's been
15	marked Deposition Exhibit Number 2. At
16	the top it says, Financial Summary, do
17	you see that?
18	A. Yes.
19	Q. Can you tell me what page 9,
20	what this page is attempting to do?
21	A. Yes.
22	Q. There's a column at the far
23	left that has what appears to be
24	different deployment scenarios, do you
25	see that?



Yes. Α.

2

deployment, A 3, A - 3 year

4

3

installation, what is that depicting,

5

what is the full A - 3 year

6

installation deployment?

7

The full deployment A - 3

There is the first one full

8

year installation depicts the scenario

9 10

aggressive assumptions over a deployment

11

period of three years.

12

Q . And right. Below that it

of full AMR deployment with the

13

says, full deployment three-year

14

installation, that would be the full deployment without the aggressive

15 16

assumptions?

17

Α. Yes.

18

19

20

21

22

23

24

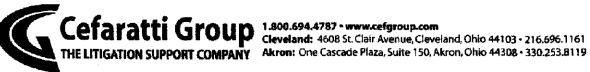
25

And then coming down the next box it says, inside meters, A - 3 year installation and the description says, a partial deployment, all 560,000 inside meters, plus 111,000 outside meters, does the A there depict again the aggressive assumptions?

> Α. Yes.

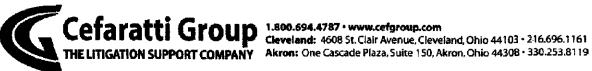


l	93
1	Q. And are the aggressive
2	assumptions in the partial deployment
3	the same as the aggressive assumptions
4	in the full deployment?
5	A. Yes.
6	Q. These deployment scenarios
7	all involve installation of the Itron
8	AMR devices?
9	A. Can you be more specific?
0	Q. There are if I'm counting
1	right now, there are five different
2	scenarios depicted on this pages
3	identified as financial summary, is that
4	correct?
5	A. Yes.
6	Q. Two full deployment scenarios
7	and three partial deployment scenarios,
8	true?
9	A. Yes.
20	Q. And those five scenarios, do
21	they all involve installation of the
22	Itron AMR devices?
23	A. No.
24	O And which ones which one



or ones involved installation of the

1	Itron?
2	A. The installation let me
3	answer that in reverse. The one
4	installation that does not involve an
5	Itron device is the inside meters
6	network three-year installation.
7	Q. The very last one, is that
8	correct?
9	A. Yes.
10	Q. And what device does that
11	deployment assume installation of?
12	A. That installation assumes a
13	Neptune meter device.
14	Q. You say that was a Neptune
15	device?
16	A. Excuse me, I misspoke, that
17	was a Hexagram, a Hexagram metering
18	device.
19	Q. Hexagram. And how does the
20	Hexagram device differ from the Itron
21	device?
22	A. The Hexagram device on the
23	meter and the Itron device on the meter
24	are similar devices.

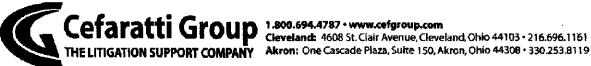


Q.

25

They perform the same

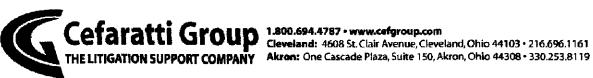
1	functions?
2	A. Essentially, yes.
3	Q. Hexagram is battery operated?
4	A. Yes.
5	Q. And Hexagram has one-way
6	communication capabilities?
7	A. Yes.
8	Q. Is there a reason why there
9	wasn't full deployment scenario done
10	with the Hexagram?
11	A. Yes.
12	Q. And what would that reasoning
13	be?
14	A. That the cost for a full
15	deployment with the Hexagram technology
16	was too expensive.
17	Q. So are the Hexagram meters
18	themselves more expensive than the Itron
19	devices?
20	MR. KUTIK: Objection.
21	A. Could you be more specific
22	or rephrase that?
23	Q. Is the cost of a Hexagram
24	meter device more expensive than an
25	Itron meter device?



Claims Services - Process Service - Record Retrieval - Document Management - Trial Graphics



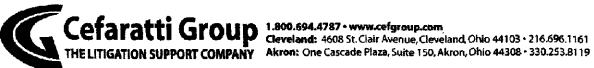
1	A. Yes.
2	Q. Is the cost to install a
3	Hexagram meter device more expensive
4	than to install the Itron device?
5	A. No.
6	Q. The second column in that
7	financial summary describes each of the
8	scenarios that we were describing or you
9	were just describing, correct?
10	A. Rephrase please?
11	Q. The second column it's
12	labeled, description and it is a
13	description of the different deployment
14	scenarios that you were discussing,
15	correct?
16	A. Yes.
17	Q. And the next column coming
18	over, it says, deployment costs, do you
19	see that?
20	A. Yes.
21	Q. And for a full deployment
22	aggressive three-year installation, it
23	says it's \$94.8 million, do you see
24	that?



Α.

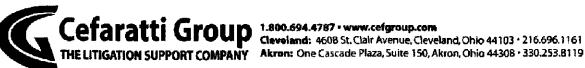
Yes.

1	Q. Can you explain where this
2	where your cost information, how that
3	was derived?
4	A. Yes.
5	Q. How was that information
6	derived, sir?
7	A. It was derived by per
8	scenario and it was derived by
9	determining the cost of the technology
0	plus the estimated labor cost to deploy
1	that technology.
12	Q. Are there any other factors
13	that went into developing the deployment
14	costs?
15	A. Yes.
16	Q. What else went into that
17	cost item?
18	A. There are certain existing
19	meter types in our distribution system
20	that the technology would not fit so to
21	speak. The technology could not be
22	installed on a certain subset of meters.
23	Q. Can you explain what
24	technology that is, Mr. Armstrong, that



was not compatible with the AMR

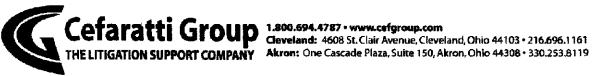
1 technology? 2 Α. Yes. 3 Objection. Go ahead. MR. KUTIK: 4 What is that? Q. 5 Α. There are existing meters in 6 our distribution system that are known 7 as tin case meters. In general, these 8 are old meters and the technology would 9 or cannot physically be installed on 10 that type of meter. 11 Q. So in order to do the 12 deployment, you had to actually take 13 that tin case meter out and put a 14 different type of meter in and then 15 install the AMR technology? 16 Α. Yes. 17 And how many of those tin 18 case meters are on your system? 19 Approximately 88,000. Α. 20 And the cost of the removal Ο. 21 of the tin case meter and the 22 replacement of that with a different 23 meter and installation of the AMR 24 technology, is that all included within 25 the deployment cost of 94.8 million



	105
1	shown on the full deployment A - 3 year
2	installation scenario?
3	A. Yes.
4	Q. And are there any other
5	costs that flowed into the calculation
6	of that 94.8 million?
7	A. No.
8	Q. What is it about, I'm
9	looking at the next deployment cost
0	down, the 102.8 million for the full
11	deployment three-year installation, what
12	is it about the aggressive nature of
13	your assumptions in the one above that
14	would actually reduce the cost of that
15	deployment?
16	A. Can you please rephrase that
17	question?
18	Q. Yes. Do you see the
19	deployment costs shown for the full
20	deployment three-year installation of
21	102.8 million?
22	A. Yes.
23	Q. And the difference between
24	that one and the one right above it is

\$8 million, is that correct?

1	A. Yes.
2	Q. And what I was asking is
3	what is it about the assumptions, the
4	aggressive assumptions in that first
5	deployment scenario that reduces the
6	deployment costs by the \$8 million?
7	A. The aggressive assumptions on
8	various items are financially lower in
9	the aggressive scenario.
10	Q. Can you give me an example?
11	A. Yes.
12	Q. What would that be?
13	A. The cost to change those tin
14	case meters that we spoke of.
15	Q. Okay. And on the full
16	deployment how does the cost treatment
17	for the tin case meters differ from the
18	scenario in which there are aggressive
19	assumptions?
20	A. Could you read that question
21	back to me please?
22	(Record read.)
23	A. Might you rephrase that
24	please?
25	Q. In the aggressive scenario,



2

3

4 5

6

7 8

9

10

11

12

13 14

15

16

17

18

19

20

21

22

23

24

25

why is it cheaper to replace the tin cost -- the tin case meters than in the nonaggressive scenario?

In the aggressive business case, we took the approach of certain cost items to be assumed to be the best that we could foresee them to be for the installation. So that is why in this example the meter change labor cost was lower than in the full deployment aggressive scenario versus the full deployment regular scenario.

So are you suggesting under Q. a normal scenario, it might take you two hours to change out the tin case and put a different meter in and the AMR device and under the aggressive you're suggesting, well, we cut that in half, maybe we can do that in an hour, I mean, best case scenario, is that the kind of thing you're talking about?

MR. KUTIK: Objection.

Can you be more specific? Α.

In the full deployment, 0.

three-year installation, what did you

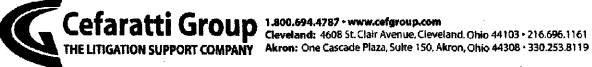
assume for the time to remove the tincase meter and installing the AMR device, do you recall?

- A. We did not assume a time.
- Q. Well, when you said your aggressive assumptions were kind of a best case scenario, what did you assume?

MR. KUTIK: For what?

- Q. All right. We've agreed that there's an \$8 million difference between the full deployment three-year installation and the full deployment aggressive scenario, is that true?
 - A. Yes.
- Q. And you stated that one of the areas in which there were cost savings was in the installation of the tin case meters, was that true?
 - A. Yes.
- Q. Can you quantify what that estimated difference would be pertaining to the tin case meters, how much of that 8 million is encapsulated in your assumptions regarding the tin case meter installations?

	144
1	A. Yes.
2	Q. How much would that be?
3	A. \$20 times 88,000. I don't
4	have a calculator.
5	Q. What does that \$20 represent?
6	A. The labor cost assumption
7	delta between the aggressive and the
8	standard business case.
9	Q. Okay. And that labor cost
10	difference is the only difference
11	between those two scenarios?
12	MR. KUTIK: With respect to tin
13	can meters?
14	Q. Tin case meters, yes.
15	A. With respect to tin case
16	meters?
17	Q. Yes.
18	A. Yes.
19	Q. And in the aggressive case
20	is there a different assumption for the
21	cost of the technology between the
22	aggressive and just the standard full
23	deployment three-year installation?
24	A. Yes.
25	Q. And what drives that



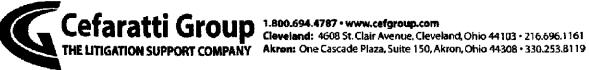
1 difference, sir? 2 MR. KUTIK: Objection. 3 Can you be more specific? 4 Why have you estimated a 5 cost difference between the full 6 deployment and the full deployment 7 aggressive relative to the cost of the 8 technology? 9 A. Because in the aggressive 10 scenario, we believe that it is possible 11 to extract a better price. 12 The next column, sir, is ο. 13 labeled, first year net income, do you 14 see that? 15 Α. Yes. 16 What do those numbers Ο. 17 represent? 18 The net of the cost benefits Α. 19 for the first year of the deployment. 20 Q. I'm sorry, could you reread 21 that answer please. 22 (Record read.) 23 Q. Do you mean that the 24 benefits -- does the 3.8 million in the 25 first column, the first row here for



1	full deployment aggressive three-year
2	installation, does that mean the
3	benefits are greater than the costs, is
4	that what you're saying?
5	A. Yes.
6	Q. And what benefits were
7	factored in to your calculation of the
8	first year net income?
9	A. I don't know specifically.
10	Q. And what cost factors did
11	you consider in deriving the first year
12	net income?
13	A. The total cost of
14	Q. The 94.8 million in the
15	first example, first scenario?
16	MR. KUTIK: Objection.
17	Mischaracterizes his testimony. Go
18	ahead.
19	A. Can you rephrase the question
20	please?
21	Q. Yes. In computing the first
22	year net income, are you suggesting that
23	in the first year the cost of the
24	technology, the labor cost to deploy the

technology, the replacement of the tin

1	case meters, all of those costs were
2	compared to the benefits and the result
3	of that comparison is \$3.8 million?
4	A. For the first year of the
5	deployment.
6	Q. And in each of the five
7	scenarios, the benefits were greater
8	than the costs in the first year each
9	time, is that correct?
10	A. The first year net income
11	are for the various scenarios are
12	shown in that fourth column.
13	Q. Okay. And they're all
14	positive numbers, does that mean that
15	the benefits of each of those scenarios
16	outweighs the cost?
17	A. Yes.
18	Q. And how did your team
19	utilize this information?
20	A. Can you be more specific?
21	Q. What did a positive 3.8
22	million in first year net income in the
23	full deployment aggressive three-year
24	installation scenario, how did your team
25	use that information?





to six, what does that column represent?

1 It's a numerical statistic Α. 2 similar to the first year net income but 3 during years four, five and six of the 4 project. 5 ο. So --6 MR. KUTIK: Before you ask your 7 question, I need to take a break. 8 MR. SAUER: Okay. 9 MR. KUTIK: We'll be back in a 10 couple minutes. 11 (Recess taken.) 12 This is Bill Armstrong, 13 before we proceed any further, I'd like 14 to go back and clarify, I believe I may 15 have misstated an answer to a previous 16 question. 17 ο. Okay. Which question are 18 you referring to, Mr. Armstrong? 19 I don't know the exact Α. 20 question number. I know I can easily 21 -- more easily refer to it as on this 22 financial summary page 9 document. 23 Q . Okay. 24 MR. KUTIK: Go ahead and explain.



Okay.

25

I want you to

1 reference column four that's titled, 2 first year net income. 3 0. Okay.

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

What that represents is the Α. effect of each particular scenario on the net income as a result of the first year of the project. Before I believe I stated that it was a net of the cost and the savings or the cost and the benefits I think is the word I used. What -- I'm correcting that and what I'm telling you that these numbers represent is the -- and again, for each scenario the relative effect on net income from the first year of the project.

And maybe it's a distinction that I'm not sure I'm completely following, but are you saying -- just a second please. Can you explain what the distinction is between your first answer and what you're answering now?

- Α. Yes.
- And please do. Q.
- 24 I believe I implied that in Α. 25 my first answer that, for example, under



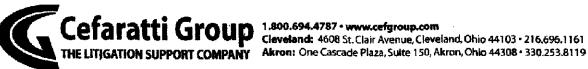
installation scenario, the number under first year net income column of 3.8 million, was the net of the cost for deployment and the savings. And you had followed with several questions regarding that. What I am now hoping to correct and explain to you is that that number represents in the first year of, again, using the full employment deployment A - 3 year installation example, in the first year of that project, that project's effect on net income is \$3.8 million.

- Q. Your original description you said it was a net of cost and benefits.

 The cost of the program, would they have an effect on net income?
- A. Net income in a macro sense are revenues less expenses, everybody pays taxes, gives you net income.
- Q. And what we were talking about, let's say the cost of technology when you're doing your full deployment A 3 year installation that cost of



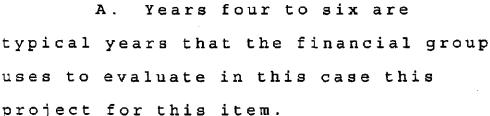
1	technology, will that have an effect on
2	net income?
3	A. I do not think so.
4	Q. And the labor cost to deploy
5	that technology will that have an effect
6	on net income?
7	A. No, it would not.
8	Q. The tin case meter, the cost
9	associated with the change out of the
10	tin case meters to create compatibility
11	with the AMR technology, would the cost
12	associated with that portion of the cost
13	you identified effect net income?
14	A. No.
15	Q. So the cost side of the
16	deployment doesn't factor into the first
17	year of the net income column at all,
18	is that correct?
19	A. That's correct.
20	Q. So the effect on net that is
21	represented by this fourth column is
22	just the benefits side of the
23	deployment?
24	A. No.
25	Q. Why not?



				A		I	t	1	w c	u	1	đ	ín	C	1	u	d e			a r	ı d		W	е	II	ıa	y
be	t	a 1	k	in	g	t	h	e	2	a	m e	е	th	i	n (g	,	i	t	W	0	u	1 (d			
inc	: 1	u ć	ie	t	h	е	r	e	dι	1 C	e	đ	0	a	n (đ	M	•	e >	ζÞ	е	n	S	e :	S	0	r
o p e	er	a t	: i	ng	J	e x	g	e	n i	s e	8	į	as	a		r	e s	u	1	t	0	f		t]	h e	:	
der	1	03	z m	e r	ı t																				-		

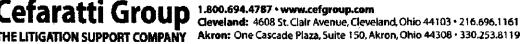
- Q. And maybe we are talking the same thing, I mean, the savings that are derived from the deployment, benefits from the deployment are what you're trying to capture in the first column, effect on net, that fourth column, is that true?
- A. Column four is the effect of the operating expense in this case savings that have that particular effect on net income.
- Q. Let's move over to the next column, steady state net income, years four to six?
- A. Same as we just explained or I just explained but for a different time period.
- Q. Okay. And was there a reason for selecting years four to six?
 - A. I don't know.

		Q.	Wa	s th	ere	a	reason	not	to
look	аţ	yea	rs	two	to	t h	ree?		



- Q. Was there a transition or a change in the effect on net in that time period that made that a relevant period to look at?
 - A. Can you rephrase that?
- Q. Yes. I was just trying to get a sense, between years one and years four to six, was there some reason in particular that made that a relevant period to look at for your study?
 - A. Yes.
 - Q. And what is that?
- A. The net income will -- the effect of the -- for any given scenario, the effect of the benefits or the savings on net income will change during the deployment time period. Under this scenario, years four to six are three years post-deployment completion,







therefore, deemed steady state which the financial numbers show in full deployment A - 3 year installation became steady at 3.5 million.

Q. And if we can step back for just a second to the first year net income column. You said relatively speaking, the greater the number, the better the scenario, did that change with your change in or your clarification on your answer to what that column represented?

A. No.

MR. KUTIK:

Q. And would the same hold true for the steady state net income column, years four to six, the higher the number, the better the scenario?

Objection.

A. Just rephrase the question please.

Q. Sure. Does the same hold true in the column marked steady state net income, years four to six, is it true that the higher the number, the more desirable the scenario?



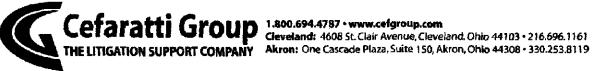
1 KUTIK: Objection. MR. 2 Α. Please rephrase or clarify. 3 How did your team view the Ο. 4 numbers that are in the various boxes 5 under the steady state net income, years 6 four to six? 7 The way the team viewed the 8 numbers under the column steady state 9 net income, years four to six was for 10 that financial measure, the higher the 11 number, the better that financial 12 measure is for any given scenario. 13 And did your team pit Q. 14 scenario versus scenario in looking at 15 how they shake out based on the results 16 of the steady state net income, years 17 four to six? 18 MR. KUTIK: I think there was a 19 word that cut out, so could you repeat 20 that please? 21 Yes. Did your team compare 22 scenarios based on the outcome of the 23 steady state net income calculation? 24 Α. Yes. 25 For example, was the full Q.



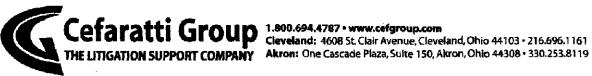
deployment aggressive three-year installation viewed more favorably than the full deployment three-year installation because the steady state net income was higher in that first scenario versus the second scenario?

- A. Under the assumptions that were made in the aggressive case, yes.
- Q. And the next column is labeled, unlevered IRR, do you see that?
 - A. Yes.
- Q. Can you explain what an unlevered IRR calculation represents?
 - A. Yes.
 - Q. And what does that mean?
- A. IRR is a particular financial analysis that is yet an additional measure of investment projects. And unlevered means that in that financial analysis calculation, the unlevered piece means that the relative financial structure of the Dominion subsidiary submitting the project is in effect discounted from that IRR calculation.
 - Q. And the results of the

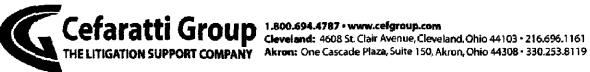
1	unlevered IRR calculation are depicted
2	in percentage form, correct?
3	A. Yes.
4	Q. And again, is the higher the
5	percentage, the more or the higher
6	the percentage, the better the scenario?
7	MR. KUTIK: Objection.
8	A. Can you rephrase the
9	question?
0	Q. Yes. How did your team
1	utilize the percentages that are
12	depicted under the unlevered IRR column?
13	A. The team used the percentages
14	under the unlevered IRR column as a,
15	again, for that financial measurement, a
16	benchmark to the relative financial
17	performance of that scenario.
18	Q. And relatively speaking, is
19	the higher the unlevered the IRR, the
20	better the scenario?
21	A. Yes.
22	Q. And why did DEO let me
23	ask you this. Are there also levered
24	IRR calculations, can you do that?
25	A. Can you rephrase the



1	question?
2	Q. Yes. When you're doing
3	financial analysis, what you've depicted
4	here are unlevered IRRs or unlevered
5	NPVs in the next column, can you also
6	do the same analyses using a levered
7	methodology?
8	A. Yes.
9	Q. And is there a reason why
10	your team chose to use unlevered versus
11	the levered methodology?
12	MR. KUTIK: Objection. It
13	assumes that that's what they did. Go
14	ahead.
15	A. Using an unlevered approach
16	enables senior management of Dominion to
17	equitably compare investment
18	opportunities from the various business
19	units.
20	Q. Again, in the next column
21	over, there's the unlevered NPV, 9.4
22	percent for 15 years, do you see that?
23	A. Yes.
24	Q. What's the 9.4 percent
25	represent?



1	A. That represents the discount
2	rate input to the NPV analysis.
3	Q. And what does 15 years
4	describe?
5	A. 15 years describes over what
6	time period we evaluated the net present
7	value.
8	Q. And why was the 9.4 percent
9	discount rate decided upon?
0	A. That was decided on because
1	that's the weighted average cost of
2	capital for Dominion for this analysis.
13	Q. Okay. Not necessarily
14	Dominion's authorized rate of return?
15	A. Weighed average cost of
16	capital doesn't have anything to do with
17	authorized rate of return.
18	Q. Okay. How was the 15 years
19	decided upon?
20	A. 15 years was decided upon
21	because looking at other industry
22	projects of a similar nature, typically
23	the technology device on the meter will
24	last 15 years.



MR.

SAUER:

25



I'm sorry, could I

24

25

have that answer reread?

(Record read.)

- When you look at the unlevered IRR column, is there a benchmark that DEO compared the results of their study to?
 - Can you be more specific?
- Q. Did you look at the results of your analysis, and right now I'm just focused on the unlevered IRR column, did you look at your results in a vacuum?
- Can you be more specific? I'm not sure what you mean by vacuum.
- I mean, did you have -let's take the 15 years, for example, you said that that was -- you had looked at what the industry practices had been and what you thought the technology would last and you came up with 15 years and that was what was input in the NPV. When you did your IRR calculations, were the numbers just what they are and you didn't do anything else with them?
 - The numbers that are shown



- As part of this analysis is there a threshold IRR percentage result that must occur for a project to go forward?
 - Not that I'm aware of.
- Q. So an IRR of zero, the project still could have gone forward?

MR. KUTIK: I'll object.

1

2

3

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

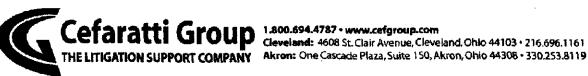
25

Incomplete hypothetical. Go ahead.

- I would say yes.
- And moving on to the unlevered NPV, what do these numbers represent?

MR. KUTIK: I'll object to the extent that this question has been asked and answered. Go ahead.

NPV analysis takes in this case deployment costs and associated savings, orients them over the time period specified and then since we're talking about a future period when the





1	analysis is being done, brings those
2	that net value back to the date and
3	time you're doing that analysis. So it
4	gives you a dollar figure from which to
5	compare alternatives.
6	Q. Again, how did your team use
7	the results of your unlevered NPV
8	analysis?
9	A. Again, on this particular
10	financial benchmark or analysis, the
11	unlevered NPV looking at 15 years and a
12	discount rate of 9.4 percent, we used
13	the results of that to compare the
14	different alternatives.
15	Q. And again, in doing that
16	comparison, would your team view the
17	higher the unlevered NPV to be the
18	better scenario?
19	MR. KUTIK: Objection.
20	A. Could you rephrase the
21	question?
22	Q. Yes. Based on the
23	assumptions contained on this financial
2A	cummary would your team wiew relative

one scenario to another scenario, the

23

24

25

better scenario to be the one that has the higher unlevered NPV?

- The scenario with the higher Α. NPV for an unlevered NPV shows the alternative that has the more attractive financial result.
- If you come down to the second box under the unlevered NPV column, full deployment three-year installation, there's a negative number in that box, do you see?
 - Α. Yes.
- Can you explain the significance of the negative value associated with that unlevered NPV calculation?
- Α. In an NPV analysis when the result is a negative number represents a scenario in that NPV analysis where the net present value is a negative number.
- I understand it's negative, what I'm trying to understand is what's the significance of the fact that that's a negative number?
 - The significance is that it's Α.



a negative number would be, again, over that time period at that discount rate that the money invested would -- the net present value of the money invested would be negative. So what I'm trying to explain is that, as we said before, the higher -- there's NPV analysis that could come out positive and negative, and again, it's the more positive the number, the better the financial indicator is for that analysis for whatever scenario you're running it on.

- Q. For let's say if you come down to the box, the third box down, there's a number in there, approximately \$23 million, do you see that?
 - A. No.
 - Q. 22,690,000?
 - A. Got it, got it. Yes.
- Q. Does that mean for over the 15 year period that you're looking at, the money invested would have a positive return in that amount over that period of time?
 - A. No.

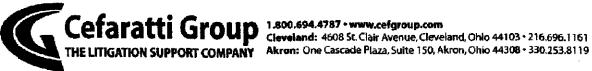




1 column, would it be true that the 2 reverse is true, the lower the number or 3 the faster the payback, the better the 4 scenario, is that true? 5 The lower the number in this 6 column would represent the scenario or 7 this payback financial measure would 8 indicate the most favorable financial 9 measurement when comparing these 10 scenarios. 11 MR. SAUER: Mr. Kutik, if I 12 could have another document marked as 13 Deposition Exhibit Number 3. It's a 14 data request, OCC 14th Set, question was 15 number 524, do you have that one there? 16 MR. KUTIK: Yes, we do. Let me 17 mark it. 18 19 (Thereupon, Deposition 20 Exhibit-3 was marked for 21 purposes of identification.) 22 23 MR. SAUER: That's been marked? 24 MR. KUTIK: Yes, it has. 25 Mr. Armstrong, do you have a Q.



ŀ	
1	copy of what's been marked as Deposition
2	Exhibit Number 3?
3	A. Yes.
4	Q. Have you seen this document
5	before?
6	A. Yes.
7	Q. And what is the document,
8	sir?
9	A. It appears to be Dominion's
10	response to an OCC interrogatory
1 1	regarding items that are articulated
12	under the section called question.
13	Q. Okay. And did you assist in
14	the preparation of this response at all?
15	A. No.
16	Q. And you see part B of the
17	question it says, if the company has not
18	conducted any business case analysis
19	that assumed a five-year deployment
20	schedule, please explain why. Or I'm
21	sorry, let's move up before that under
22	A, it says, please explain whether the
23	company has conducted any business case
24	analysis that assumed a five-year





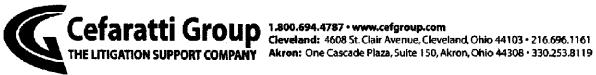


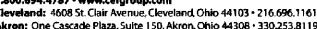
deployment schedule and the answer is

1 your company did not, is that your 2 understanding? 3 Α. Yes. 4 And then under B it says, 5 the company has not conducted any 6 business cases that assumed the 7 five-year deployment schedule, please 8 explain why. And then the response 9 below is, the company's decision to 10 propose a five-year deployment was based 11 on additional criteria, including the 12 time needed by company employees to 13 complete the program, and additional 14 studies were not necessary, do you see 15 that? 16 Yes. Α. 17 Q. And is it your understanding 18 that the deployment the company is 19 undertaking right now is a five-year 20 deployment? 21 MR. KUTIK: Objection. 22 Could you rephrase the 23 question please? 24 **Q** . Yes. Under what period of 25 time does the company propose to deploy



1	its AMR technology?
2	A. It's my understanding that we
3	have proposed a five-year deployment.
4	Q. And do you know when that
5	decision was made?
6	A. No.
7	Q. Was that decision made while
8	your business case team was still
9	intact?
10	A. I answered that I don't know
11	when that decision was made, so I can't
12	answer this question.
13	Q. The analysis that we've been
14	looking at on page 9 was all done
15	pursuant to an assumption that the
16	deployment would be in three years,
17	correct?
18	MR. KUTIK: Are you talking about
19	Exhibit 2?
20	MR. SAUER: Back on Deposition
21	Exhibit 2, page 9.
22	A. All of the scenarios on
23	Exhibit 2, page 9 assumed three-year
24	deployment scenarios or time frames.
25	Q. And why was the three-year



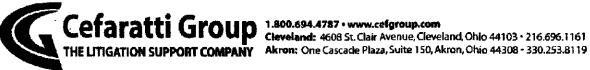




1 deployment scenario selected? 2 That deployment scenario was 3 selected because that's the time frame 4 that would be feasible for those 5 deployments to occur assuming we use a 6 contractor. 7 Assuming you use a contractor 8 for what phase of the project? 9 For the labor to deploy, 10 excuse me, for the labor to deploy the 11 technology. 12 Why assume three years for a 13 contractor? 14 MR. KUTIK: Objection. 15 Can you rephrase the question 16 please? 17 Yes. You said you decided Q. 18 on three-year deployment because of the 19 assumption that you were going to use a 20 contractor to perform the deployment. 21 Why did you assume three years for that 22 assumption? 23 Based on our experience with 24 the Dominion Virginia Power deployment 25 and industry experience and knowledge,



1	we knew for the deployment scenarios in
2	question on Exhibit 2, page 9, that with
3	a contractor they could be feasibly
4	completed in that time frame.
5	Q. And now that the deployment
6	is five years, does that still assume
7	using a contractor?
8	A. No.
9	Q. Does it assume using Dominion
10	in-house labor?
11	A. If by Dominion you mean
12	Dominion East Ohio, the answer is yes.
13	Q. Exclusively Dominion East
14	Ohio labor?
15	A. With the exception of myself
16	and David Batson, whom we referenced
17	earlier, we're on the deployment
18	management team.
19	Q. Okay. But as far as the
20	actual, the physical deployment, there's
21	no assumption for the use of a
22	contractor to do any of that work?
23	A. Rephrase please.
24	Q. As far as the actual
25	physical deployment of the AMR devices



1 under a five-year deployment scenario, 2 you're not assuming the use of any 3 contract labor to do that deployment, is 4 that correct? 5 MR. KUTIK: And this is as 6 proposed, correct? 7 MR. SAUER: As proposed. 8 That is true. Α. That is 9 correct. No contractor. 10 Does the use of in-house 11 labor versus contract labor change the 12 cost profile of the deployment? 13 MR. KUTIK: Objection. 14 Could you be more specific? 15 Has your team done any 16 analysis on the change in deployment 17 costs that might arise due to the use 18 of in-house labor rather than contract 19 labor? 20 Yes. Α. 21 And when did your team 22 perform that analysis? 23 I can only answer that 24 relatively, it was after the decision of



25

a five-year scenario was put forth.

1	Q. But your team did that
2	analysis, is that correct?
3	MR. KUTIK: Objection.
4	A. Just rephrase the question.
5	Q. Did I understand you to say
6	your team has done the analysis to
7	compare the deployment cost of the
8	the difference in deployment cost
9	assuming the use of Dominion East Ohio
10	labor versus contract labor?
11	A. Yes.
12	Q. Your team did that study or
13	analysis?
14	A. Was that another question?
15	Yes.
16	Q. And I asked when did your
17	team do that analysis?
18	MR. KUTIK: And he answered that
19	question after the decision was made to
20	go to the five-year scenario.
21	Q. And was that analysis
22	performed in a comparable fashion to the
23	analysis that was performed on what is
24	depicted on page 9 of Deposition Exhibit

Number 2?

25

1	A. No.
2	Q. So you didn't do a full
3	deployment aggressive five-year
4	installation and look at what the net
5	present value of that scenario might
6	have been?
7	A. We did not do that.
8	Q. Do you recall what the
9	difference in the deployment cost was
10	when you did that analysis of using
11	company labor versus contract labor?
12	A. Yes.
13	Q. And what was that, what did
14	that analysis show?
15	A. That the difference in,
16	again, we're talking labor costs for
17	deployment, for a five year full
18	deployment timeline would be
19	approximately \$4 million difference.
20	Q. I'm sorry, you trailed off
21	after you said \$4 million, I didn't hear
22	the rest.
23	A. I'm sorry. The difference
24	between

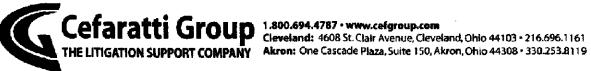
MR.

KUTIK:

25

The word was

1	difference.
2	A. A \$4 million difference.
3	Q. Was it more expensive to use
4	company labor than contract labor?
5	A. Yes.
6	Q. And did you look at that
7	only in the sense of a full deployment
8	scenario?
9	A. Be more specific. Did we
10	look at what?
11	Q. The difference in the cost
12	of labor for the deployment of AMR
13	devices using company labor versus
14	contract labor?
15	A. We looked at that under the
16	assumption of a five-year deployment.
17	Q. For how many different
18	scenarios?
19	A. Just the one scenario.
20	Q. Mr. Armstrong, when you
21	looked at what changed relative to the
22	costs, were there any change in the
23	benefits as a result of using company
24	labor versus contract labor?

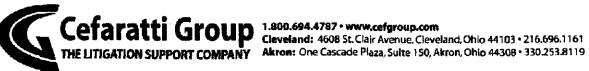


Α.

No.

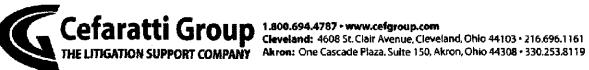
25

1	Q. Based on the results of the
2	financial summary that's shown on
3	Deposition Exhibit 2, page 9, did your
4	team make any recommendations to the
5	steering committee as to which scenario
6	was most desirable?
7	A. No.
8	Q. Was there any discussion with
9	the team from the steering committee
10	regarding one scenario versus another?
11	A. Yes.
12	Q. And based on that discussion,
13	did the team have an understanding of
14	what scenario the steering committee
15	felt was most desirable?
16	A. No.
17	Q. Mr. Armstrong, do you have
18	an opinion as to which of the five
19	scenarios shown on page 9 is most
20	desirable?
21	MR. KUTIK: I'll object to the
22	extent it's beyond the scope of this
23	deposition, but you can answer.
24	A. Yes.



And which installation or

1	which scenario do you believe to be most
2	desirable?
3	MR. KUTIK: Same objection.
4	A. I believe the most desirable
5	installation is full deployment over a
6	five-year period performed by company
7	labor.
8	Q. And how do you come to that
9	conclusion, sir?
0	MR. KUTIK: Objection.
1	Q. Well, let me take a step
2	back before we do that. Based on the
13	five scenarios that are on page 9 of
14	Deposition Exhibit 2, which of these
15	five do you believe to be most
16	desirable?
17	A. I would believe the scenario
18	full deployment three-year installation,
19	in other words, the second row down, to
20	be the most desirable.
21	Q. Now, as I come across the
22	columns, the most desirable scenario
23	that you've identified is the most it
24	has the highest deployment cost?

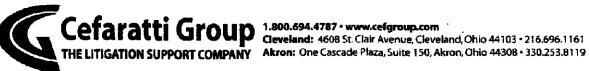


Α.

25

There was a word that

1	blanked out there.
2	Q. Okay. As I come across the
3	full deployment three-year installation
4	that you have identified as being the
5	most desirable scenario on this page,
6	the deployment cost column shows it to
7	be that scenario to have the highest
8	deployment cost, correct?
9	A. Yes.
10	Q. And in the next column over,
11	the first year net income, it has the
12	least effect on net, correct?
13	A. Yes.
14	Q. And if I keep coming across,
15	it's not the worst, it's the it's
16	the second to lowest effect on net in
17	this column, correct?
18	A. No.
19	Q. No? What is this, what does
20	the steady state net income
21	A. It appears
22	Q presume?
23	A. Can you repeat the question
24	he asked me?
25	Q. Yes. I'm sorry. It's



1 getting a little confusing here. As you 2 come across the columns under the 3 scenario that you've identified as the 4 most desirable, I'm trying to understand 5 where it ranks in the various analyses 6 that are performed on this page, as you 7 come to the steady state net income, 8 years four to six where you said the 9 greater the number, the more desirable 10 the scenario, I said this isn't the 11 lowest, but it's the second to the 12 lowest on the page? 13 MR. KUTIK: Objection.

Mischaracterizes his testimony. Go ahead.

A. The full deployment three-year installation is the second lowest for the steady state net income, years four to six.

Q. As we come across to the unlevered IRR, which one of the scenarios has the most desirable unlevered IRR calculation?

A. The aggressive inside meter, partial deployment, plus 111,000 outside



14

15

16

17

18

19

20

21

22

23

24

25

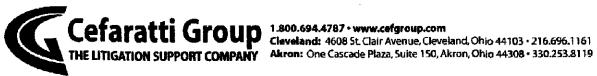
1 meters. 2 And which one has the least Q. desirable unlevered IRR? 3 The full deployment three 4 years installation. 5 6 And if we come across to the 7 unlevered, net present value, 9.4 8 percent, 15 years column, which one has 9 the most desirable result of that 10 particular calculation? 11 Α. The inside meters aggressive 12 partial deployment, plus the 111,000 13 outside meters. 14 And which one has the least 15 desirable NPV calculation? 16 Α. The full deployment 17 three-year installation. 18 Ο. As we come across to the 19 payback, sir, which one has the most 20 desirable payback calculation? 21 The inside meters aggressive 22 three-year installation. 23 And which one has the worst? Ο. 24 The longest payback is the



25

full deployment three-year installation.

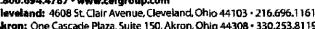
	· ·
1	Q. So I'm somewhat confused as
2	to what leads you to the conclusion that
3	the full deployment three-year
4	installation is the most desirable
5	scenario on this page?
6	MR. KUTIK: So your question is?
7	Q. What is it about the full
8	deployment three-year installation that
9	makes it the most desirable scenario on
10	this page?
11	A. My view, which is what you
12	asked, that makes the full deployment
13	three-year installation scenario on this
14	page the most desirable in my view
15	relies on factors that are not
16	articulated on this page.
17	Q. And what would those factors
18	be?
19	A. What I need to establish
20	that and it appeared to me that you
21	were primarily in your questioning
22	comparing the full three-year
23	installation deployment versus the



installation scenario.

24

25





inside meter aggressive three-year

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

I wasn't doing any comparison Ο. whatsoever other than trying to get some sense from you as to what the relative ranking of these different scenarios were based on the outcome of the financial analysis that you and your team performed.

The reason that I'm -- that my opinion that the full deployment is the most desirable solution on this page is that any nonfull deployment solution, and let me speak to the aggressive full year deployment, that as we have spoken, the aggressive assumptions assume the best of all worlds for various cost factors which I believe are unrealistic. So any deployment short of full deployment in effect creates or would create two classes of customer in the Dominion East Ohio system. One would be if you were, on any partial deployment shown on Exhibit 2 page 9, if you happen to be endowed with an inside meter or an outside meter that just happened to be on a route where there



was predominantly inside meters, you 2 would at the end of deployment be 3 blessed with monthly meter readings, 4 accurate monthly meter readings, 5 dramatically reduced consecutive 6 estimates. And if you happened to have 7 a meter that was not part of any of 8 these partial deployments, you would 9 continue to get the quality of service 10 that exists today that includes manual 11 meter reading, subject to errors in that 12 manual meter reading process, additional 13 consecutive estimates, along with other 14 company benefits of safety, the fact 15 that to have a less than full deployment 16 means that we would have to have two 17 different meter reading systems 18 maintained with two different databases 19 in our customer Legacy system, that 20 would all increase the possibility of 21 mistakes being made as we try to service 22 those customers on essentially two 23 dramatically different platforms of

1

24

25

Are those the factors then Q.



service.

1,800,694,4787 • www.cefgroup.com

Cleveland: 4608 St. Clair Avenue, Cleveland, Ohio 44103 • 216.696.1161 HE LITIGATION SUPPORT COMPANY Akron: One Cascade Plaza, Suite 150, Akron, Ohio 44308 - 330.253.8119

1	that lead you to the conclusion that a
2	full deployment three-year installation
3	is preferable
4	A. Those are the
5	Q based as scenarios as
6	they are on page 9?
7	A. Of the scenarios on page 9,
8	those are the factors that lead me to
9	conclude that the full deployment
10	three-year installation is the most
11	desirable scenario.
12	Q. Are there any of those
13	factors contained within your business
14	case analysis that was presented to the
15	steering committee?
16	A. No.
17	MR. KUTIK: Why don't we take a
18	break?
19	MR. SAUER: All right.
20	(Recess taken.)
21	MR. SAUER: Mr. Kutik, I had
22	sent you a couple of documents, one of
23	which is discovery response to a 14th
24	set question number 517 and I think
25	attached to that is a very similar

