

645 1 STATE OF NEW MEXICO ENVIRONMENTAL IMPROVEMENT BOARD 2 3 No. EIB 21-27(R) 4 IN THE MATTER OF PROPOSED NEW REGULATION, 20.2.50 NMAC - Oil and Gas Sector - 5 Ozone Precursor Pollutants 6 7 8 TRANSCRIPT OF PROCEEDINGS 9 10 BE IT REMEMBERED that on the 22nd day of 11 September, 2021, this matter came on for hearing before 12 FELICIA ORTH, Hearing Officer, virtually through Cisco 13 Webex Meetings video conferencing, commencing at 9:00 a.m. 14 15 16 17 18 19 20 REPORTED BY: THERESA E. DUBOIS, RPR, CCR #29 Albuquerque Court Reporting Service, LLC 3150 Carlisle Boulevard, Northeast Suite 104 Albuquerque, New Mexico 87110 (505) 806-1202 abqcrs@gmail.com 21 22 23 24 25	647 1 A P P E A R A N C E S (Continued) 2 For the New Mexico Oil and Gas Association: 3 ERIC L. HISER, ESQ. BRANDON CURTIS, ESQ JORDAN HISER & JOY, PLC 5080 North 40th Street Suite 245 Phoenix, Arizona 85024 (480)505-3900 ehiser@jhjlawyers.com bcurtis@jhjlawyers.com 7 DALVA L. MOELLENBERG, ESQ. GALLAGHER & KENNEDY, P.A. 1239 Paseo de Peralta Santa Fe, New Mexico 87501 (505)982-9523 dlm@gknet.com 11 For the Conservation Votes New Meido, Dine C.A.R.E., 12 Earthworks, Natural Resources Defense Council, San Juan Citizens Alliance, Sierra Club, and 350 New Mexico 13 ("Clean Air Advocates"): 14 TANNIS FOX, ESQ. WESTERN ENVIRONMENTAL LAW CENTER 409 East Palace Avenue, #2 Santa Fe, New Mexico 87501 (505)629-0732 fox@westernlaw.org 17 DAVID R. BAAKE, ESQ. BAAKE LAW LLC 2131 North Main Street Las Cruces, New Mexico 88001 (575)343-2782 david@baakelaw.com 21 For Environmental Defense Fund: 22 ELIZABETH DELONE PARANHOS, ESQ. DELONE LAW INC. 1555 Jennine Place Boulder, Colorado 80304 (303)442-0610 elizabeth@delonelaw.com 24 25
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653 1 ENVIRONMENTAL DEFENSE FUND WITNESS: (Economics) 2 MAUREEN LACKNER 3 Direct Examination by Ms. Paranhos 823 4 Cross-Examination by Ms. Fox 830 5 Cross-Examination by Mr. Hiser 832 6 Examination by the Board 835 7 NMED WITNESSES: 8 SUSAN DAY AND ELIZABETH BISBEY-KUEHN 9 Direct Examination by Ms. Katz 870 10 Cross-Examination by Mr. Hiser 886 11 Cross-Examination by Mr. Rose 888 12 Examination by the Board 892 13 Redirect Examination by Ms. Katz 896 14 IPANM WITNESS: 15 JEFFREY "RYAN" DAVIS 16 Direct Examination by Mr. Rose 899 17 Cross-Examination by Ms. Katz 928 18 Cross-Examination by Ms. Fox 929 19 Examination by the Board 934 20 PUBLIC COMMENT: (5 p.m.) 21 ADRIENNE SANDOVAL 914 22 ANNA HANSEN 916 23 LINDA BURCHFIEL 919 24 KAREN ADAMS 922 25 ANTHONY COOK 923 26 NMED WITNESSES: (Recalled) 27 SUSAN DAY, ELIZABETH BISBEY-KUEHN AND BRIAN PALMER 28 Surrebuttal Examination by Ms. Katz 944 29 Surrebuttal Examination by the Board 951 30 CERTIFICATE OF REPORTER 958	655 1 HEARING OFFICER ORTH: Good morning. My name is 2 Felicia Orth; I'm the Hearing Officer appointed by the 3 Environmental Improvement Board to conduct a hearing in 4 21-27, the rulemaking related to ozone precursor. 5 We begin each morning with public comments, and I 6 have three public commenters who reached out to the 7 Board's Administrator, Pamela Jones, to indicate a desire 8 to offer public comment. In the event you are on the 9 platform and would like to offer comment and have not yet 10 offered comment, please indicate in the Chat. The Chat is 11 enabled for everyone, so please just reach out in the Chat 12 and I'm happy to take your comment at this time or at any 13 time throughout the hearing. We have public comment 14 sessions every day at 9, 1 and 5. 15 Public comment is taken through audio, not video 16 and is limited to five minutes. So Cynthia Black -- the 17 three I have this morning and I'll call you in this order: 18 Cynthia Black, Tom Williams and Nora Dunn. Ms. Black, I 19 am unmuting you. Can you hear me? 20 MS. BLACK: Yes. Can you hear me? 21 HEARING OFFICER ORTH: Yes, you're coming through 22 clearly. Thank you. If you would raise your right hand, 23 please. Do you swear or affirm to tell the truth? 24 MS. BLACK: Yes, I do. 25 HEARING OFFICER ORTH: Thank you. I'm going to
654 1 E X H I B I T S 2 NOTE: No exhibits are attached physically to this 3 transcript. They can be found online at www.env.nm.gov.opf/docketed-matters/ 4 NMOGA EXHIBIT: ADMITTED 5 Exhibit 57 - Surrebuttal Testimony Slides of John 6 R. Dunham 849	656 1 start your five minutes now. 2 CYNTHIA BLACK, 3 having been first duly sworn or affirmed, 4 gave public comment as follows: 5 PUBLIC COMMENT BY CYNTHIA BLACK 6 MS. BLACK: Well, good morning. My name is 7 Cynthia Black; I reside in Lincoln County. My background 8 is in geology. I have two degrees in geology, a Bachelor 9 of Science from the University of Aberdeen in Scotland and 10 a Master of Science from Texas A & M in College Station. 11 I have a 40-year career working in the oil and gas 12 industry as a geophysicist and a geologist and I continue 13 to consult. 14 Most of my life has been spent working for 15 operators, ranging from Exxon Arco, Occidental and a host 16 of small independents. I've worked in the Permian Basin, 17 including Lea and Eddy County, as well as Texas, Oklahoma, 18 California, Wyoming, Utah and elsewhere in the continental 19 United States. 20 I've seen many cyclic changes in the industry 21 throughout my career, most of those being huge changes in 22 price due to a variety of reasons. The rest of this is -- 23 is my just brief description of what I think is going on 24 at a higher level. 25 The methane advisory panel was formed to address

657 1 most proximally methane leaking and venting in the -- in 2 the field from various sources in the oil and gas 3 industry. Obviously, the -- the process that the methane 4 advisory panel has taken is admirably collaborative. It 5 also appears that its root purpose is to address climate 6 change. And from this, I source Governor Grisham's 7 Executive Order 2019-03, and the statements from the New 8 Mexico Interagency Climate Change Task Force. 9 In the popular press and, you know, we can go to 10 the Albuquerque Journal or other parts of the state and 11 look at news articles; the primary goal is to reduce 12 low-level ozone. And I stress low-level as opposed to 13 high level, which is not at issue. This would be due -- 14 due to the fact that in some parts of New Mexico, ozone 15 levels are -- have reached within 95 percent of EPA 16 imposed limits. So that -- that is an issue and it's 17 particularly an issue in -- in metropol -- you know, 18 larger population, metropolitan areas like Albuquerque and 19 Las Cruces and places like that, where you have a 20 concentration of sources; primarily, vehicles -- 21 combustion gas vehicles. 22 So, to me, the question isn't, you know, whether 23 or not, you know, climate change -- if manmade climate 24 changes represents some kind of existential threat, but 25 whether singling out small, independent oil and gas	659 1 stress that the methane advisory panel recommendations, as 2 I understand them, are going to kill off many jobs and 3 hurt small industry and the small oil and gas operation. 4 The big operators can afford to comply with these regs, 5 but I think it's better to let industry creatively solve 6 these problems that they have, as they have been doing for 7 many decades. And I've been witness to those changes in 8 regulations. And I know what the industry is capable of 9 doing. So thank you very much. I appreciate your time. 10 HEARING OFFICER ORTH: Thank you, Ms. Black. 11 All right. So let me see here. Tom Williams. 12 Let me look for Mr. Williams on the attendee list. I 13 don't see Mr. Williams in the attendee list. Let me move 14 to Nora Dunn. I believe I did see Ms. Dunn. Oh, it's 15 Norma Dunn, excuse me. Ms. Dunn, can you hear me? 16 MS. DUNN: Yes. Hi. 17 HEARING OFFICER ORTH: All right. Hello. If you 18 would raise your right hand, please. 19 MS. DUNN: Okay. My husband is -- my husband, 20 Sandy Dunn, is going to speak. 21 HEARING OFFICER ORTH: Oh, all right. That's 22 fine. Mr. Dunn, if -- 23 MR. DUNN: Yes, ma'am. 24 HEARING OFFICER ORTH: If you would raise your 25 right hand, please. Do you swear or affirm to tell the
658 1 operators in New Mexico will have any effect on these 2 broader issues. And that's why I really wanted to address 3 this at that level. You know, with regard to climate 4 change, I hardly want to go into any detail. I have a lot 5 of background in this; I've done a lot of my own study. 6 You know, I'm research oriented as well as technically 7 oriented, which obviously combines. 8 But thanks to the media and other governmental 9 bodies, climate change science is not well understood, but 10 briefly -- okay, pollutions, such as smog, i.e., ozone -- 11 low-level ozone is conflated with this climate change, and 12 that's just inaccurate. And it's also wrong because it 13 prevents us from tackling pollution in a constructive way. 14 There are ways to address ozone, for example, and it also 15 keeps us from adapting to changes in climate. And I 16 certainly admit that there are -- a fraction of climate 17 change can be manmade, particularly in a micro-climate 18 sort of way, but it's also something we've been doing as a 19 species throughout the human history. So, you know, 20 just -- just briefly -- 21 HEARING OFFICER ORTH: Ms. Black? 22 MS. BLACK: Am I done? Because I can be -- I'm 23 about done, really. 24 HEARING OFFICER ORTH: All right. 25 MS. BLACK: I just want to -- thank you -- just	660 1 truth? 2 MR. DUNN: Yes, I do. 3 HEARING OFFICER ORTH: Thank you. I can hear 4 your voice clearly. Just make sure you keep your voice up 5 and I'm going to start your five minutes now. 6 SANDY DUNN, 7 having been first duly sworn or affirmed, 8 gave public comment as follows: 9 PUBLIC COMMENT OF SANDY DUNN 10 MR. DUNN: Okay. Thank you for doing this and 11 thank you for hearing us. We appreciate it. I'm going to 12 be speaking from a layman's term. I believe the last 13 speaker was very good at making points from her level of 14 experience. My level of experience is personal. I've 15 always been fond of alternative forms of transportation 16 and power sources and I have electric bicycles and 17 scooters and things likes that. And so my mind is open, 18 of course, to alternative energy sources. 19 I wanted to speak a little bit about that because 20 I have -- I spent a lot of years in California and a lot 21 of -- a lot of time in the desert area around Palm 22 Springs, California, where they have wind farms and things 23 like that out there. And there were some observations I 24 made about those alternative sources; one of them being 25 that the actual wind farm's efficiency, which there are

661 1 different ways of calculating it, the methods I learned 2 was the output versus the cost, versus the environmental 3 impact. And the wind farms are pretty low on their 4 efficiency. I think the maximum efficiency achieved is 26 5 percent, versus -- versus oil or even coal-produced 6 energy, which is almost 100 percent. 7 And what -- what was noted out there was there 8 were certain environmental issues associated with wind 9 farms, one of them being the actual reliability of the 10 turbines themselves. They're very high maintenance, they 11 require specific talents of people called windmill 12 wranglers, who work way up high off the ground and work on 13 these units because, we, in the local community, noticed 14 that a lot of these windmills were spending a lot of 15 downtime. And it was because of the basic unreliability 16 of those units. 17 On top of that there were environmental concerns 18 about the effect on -- on bird migration, and one of those 19 windmills can take out an entire flight of birds. And it 20 was a real concern for a lot of people in the local 21 environmental movement. On top of that, the blades on 22 those things, when they wear out, they generally crack or 23 break. They have to take them off and replace them, 24 there's nowhere they can -- there's no way they can 25 recycle those materials. They're not recyclable. They	663 1 HEARING OFFICER: Mr. Dunn, would you wrap up, 2 please? 3 MR. DUNN: Oh, yes. Thank you. Easily what I'm 4 saying is the alternatives to oil and gas, I don't really 5 believe we're there yet. I support it for future use, 6 but, currently, if we get really ambitious about replacing 7 oil and gas production with these alternative methods, I 8 think the cost in itself -- especially the cost to the 9 consumer and the environment, we're just not quite ready 10 yet. And that's really the point I wanted to make. I'm 11 not anti-alternative energy. I really am in support of 12 putting resource toward the development of these -- of 13 these alternatives, but I don't think we're ready yet. 14 And I hope I made my point without getting too confusing 15 here. Thank you very much. 16 HEARING OFFICER ORTH: Thank you, Mr. Dunn. 17 MR. DUNN: All right. Have a good day. 18 HEARING OFFICER ORTH: Thank you. Let's see. 19 Mr. McCartney reached out through the Chat. 20 Mr. McCartney, can you hear me? 21 MR. McCARTNEY: Yes, I can. Can you hear me? 22 HEARING OFFICER ORTH: Yes, your voice is coming 23 through clearly. If you would, please, raise your right 24 hand. Do you swear or affirm to tell the truth? 25 MR. McCARTNEY: Yes, I do.
662 1 certainly don't decompose, so now they have to have 2 special areas where they bury these blades vertically, 3 front to back in these really large holes. And so that's 4 becoming a concern as wind farms are increasing in this 5 country. We have an increased concern about what's going 6 to happen to all of that old stuff. 7 And so, along with that, I was looking into solar 8 energy, of course, for my home. And I was pretty alarmed 9 to find out that -- I had always been told that solar 10 panels were made essentially out of -- out of silicon, and 11 that was the primary ingredient, but -- and it was an 12 environmentally friendly process of producing them, which 13 turns out isn't the truth. 14 The actual processing that's required for 15 producing solar panels produces all kinds of caustic 16 environmental dangerous materials. Silicon dust itself, 17 that is produced when they cut the cells for the solar 18 panels. It's called CURF. And it's -- and it's -- 19 there's up to 50 percent waste in the production of solar 20 panels. And that stuff is very toxic to workers and the 21 environment itself. Silica gas, very explosive, can 22 spontaneously combust. Silicon production, the production 23 reactors are cleaned with something called sulfur 24 hexafluoride, which is one of the most potent greenhouse 25 gas per molecule stuff -- excuse me.	664 1 HEARING OFFICER ORTH: Thank you. I'm starting 2 your five minutes now. 3 WARD McCARTNEY, 4 having been first duly sworn or affirmed, 5 gave public comment as follows: 6 PUBLIC COMMENT OF WARD McCARTNEY 7 MR. McCARTNEY: Yeah, thank you for considering 8 my comments. I'd like to speak to the issue of methane 9 gas pollution as the generalist, you know, the overall big 10 picture. And the first thing is that the fossil fuel 11 industry will and has bombarded us with how much it would 12 cost the industry; billions of dollars to address this. 13 Methane leaks and methane that is 86 times as potent a 14 greenhouse gas as CO2. 15 What the fossil fuel fails to acknowledge is that 16 Hurricane Ida cost 22 billion, destroying people's homes, 17 property and lives. What the fossil fuel industry fails 18 to acknowledge is the devastating forest fires in 19 California, Oregon and Washington, et cetera, and the 20 resulting smoke that we have all had to contend with the 21 last several summers. And for a guy like me, who has 22 late-onset asthma, those have not been fun summers. 23 In the 80s there were an average of three 24 one-billion-dollar weather events a year. Last year there 25 were 22. Those costs are borne by us, not the fossil fuel

665 1 industry. 2 But the real issue is the UN report last week, 3 which stated, "Even if all the worlds nations were to 4 adhere to the climate fossil fuel reduction pledges, the 5 world will still warm by 2.7 degrees centigrade, and 6 that's 5 degrees Fahrenheit by 2100." This report means 7 that we have to do way better at addressing climate change 8 than we're even hoping to do now so that our kids and our 9 grandkids have a hope for a future. 10 The methane leaks are a very doable fix that 11 would be a huge step in the right direction. Please take 12 that step. Thank you. 13 HEARING OFFICER ORTH: Thank you very much, 14 Mr. McCartney. 15 I don't have anyone else reaching out through 16 Chat to offer public comment, so we will -- again, the 17 next opportunity for public comment is at 1 p.m. And 18 1 p.m. and 5 p.m. every subsequent day of this hearing. 19 So thank you all very much. 20 Before we begin the testimony this morning, and 21 this morning we'll be focusing on economic analysis, I do 22 need to make sure that we have Ms. Fox with us. She was 23 having so much trouble with the sign in this morning. Oh, 24 wait. 25 MS. FOX: I figured it out. Yeah, thank you.	667 1 HEARING OFFICER ORTH: Good morning, Mr. Dunham. 2 You're -- you're a little soft. I'd ask you to keep your 3 voice up. 4 MR. DUNHAM: Okay. 5 HEARING OFFICER ORTH: And if you would please -- 6 oh, that's better, yeah. If you would please raise your 7 right hand. Do you swear or affirm to tell the truth? 8 MR. DUNHAM: Yes, I do. 9 HEARING OFFICER ORTH: Thank you very much. If 10 you see this -- this lady on the screen in blue is our 11 court reporter, we're making a transcript, which is the 12 official record of this hearing. If you see her wave her 13 hands, I'll be watching her as well, please stop until we 14 figure out the audio issue. So thank you. 15 MR. DUNHAM: Okay. Thank you. 16 HEARING OFFICER ORTH: And it's Mr. Hiser. Good 17 morning, Mr. Hiser. 18 MR. HISER: Good morning, Madam Hearing Officer. 19 JOHN R. DUNHAM, 20 having been first duly sworn, was examined and 21 testified as follows: 22 DIRECT EXAMINATION OF JOHN R. DUNHAM 23 BY MR. HISER: 24 Q. Good morning, Mr. Dunham. Could you please state 25 your full name and spell it for the record, please?
666 1 Appreciate it. 2 HEARING OFFICER ORTH: Oh, terrific, Ms. Fox. 3 Thank you. 4 All right. Is there anything else we should do 5 before we leap into the testimony on economic analysis? 6 No? 7 Counsel, if you would, please, check the panelist 8 list. As I saw your witnesses join the attendee list, I 9 did try to move them all over, but make sure that I -- 10 make sure that I got them all, if you would, please. Let 11 me know if there's someone else who should be -- should be 12 a panelist. 13 So do I understand, Ms. Katz, we're going to 14 begin this morning with Ms. Day? 15 MS. KATZ: Thank you, Madam Hearing Officer. 16 Good morning, and members of the Board. That topic is 17 NMOGA's topic and so the topic will begin with Mr. Dunham, 18 I believe. 19 HEARING OFFICER ORTH: With Mr. Dunham. And then 20 we're going to Powell, Day, Palmer and Lackner; is that 21 correct? 22 MS. KATZ: Yes, that's correct. 23 HEARING OFFICER ORTH: All right. Thank you. Is 24 this Mr. Dunham? Yes, I see Mr. Dunham on the screen. 25 MR. DUNHAM: I'm here.	668 1 A. Yes, sir. My name is John R. Dunham, and my last 2 name is D-U-N-H-A-M. 3 Q. And could you state your involvement in this 4 proceeding? 5 A. I prepared a cost report for the New Mexico Oil 6 and Gas Association, a cost of the regulation. 7 Q. And is the NMOGA Exhibit No. 34, which was 8 previously admitted, an accurate copy of your resume? 9 A. Yes, sir. 10 Q. Could you explain your qualifications as to how 11 they relate to your participation in the hearing today? 12 A. Yes, sir. I'm the managing partner of John 13 Dunham and Associates, an economic research firm. I've 14 been in business for about a little over 20 years. I've 15 been an economist for 35 -- 36 years. We do economic and 16 policy research for dozens and dozens of different 17 industries, including the oil and gas and natural gas 18 industry. 19 We prepared the economic impact -- the economic 20 impact study of the Western oil and natural gas industry 21 for the -- for the Western Energy Alliance. And we've 22 also performed regulatory impact analysis for the six 23 different regulations on oil and natural gas at the 24 federal level. We've been a consultant to the Western 25 Energy Alliance, to NMOGA, to the U.S. Oil and Gas

669 1 Association, to Anadarko, to the New Mexico -- I'm sorry, 2 the Idaho Retailers Association, the New Mexico Retailers 3 Association, to name a number. 4 Q. Does NMOGA Exhibit A6 reflect your direct 5 testimony previously filed in this matter? 6 A. Yes, sir, it does. 7 Q. And you don't need to make any changes to that 8 exhibit; is that correct? 9 A. I don't believe so, no. 10 Q. Do you adopt Exhibit A6 as your direct testimony 11 in this matter, as if you had given it during this 12 hearing? 13 A. Yes, sir. 14 Q. Did you rely on the following exhibits in 15 preparing your testimony: NMOGA Exhibit 35, the May 2020 16 OVWS estimates, NMOGA 36, the Western Oil and Natural Gas 17 study -- Economic Impact Study from 2018? 18 A. Yes, sir. 19 Q. NMOGA 37, a Well Methodology Report? 20 A. Yes, I did. 21 Q. NMOGA 38, a Regulatory Impact Analysis of the 22 Proposed Emissions Standard for New and Modified Sources 23 in Oil and Gas Natural Sector -- Oil and Natural Gas 24 Sector? Excuse me. 25 A. The EPA report, yes.	671 1 interrupting. Mr. Hiser, can you point us to where the 2 slides were. Are those the slides that were sent last 3 night or? 4 MR. HISER: So I think this is that slide. It 5 may be -- we did circulate these. 6 Q. (BY MR. HISER) Mr. Dunham, are you using the 7 ones circulated last night or is this an earlier version? 8 A. The one I sent last night. I apologize. 9 MR. HISER: You should have something in your 10 email reflecting the final that was submitted. 11 HEARING OFFICER ORTH: So I trust Pam has 12 forwarded those emails to the Board members. 13 Pam, if not, please do that now. 14 MS. KATZ: Madam Hearing Officer? 15 HEARING OFFICER ORTH: Yes. Ms. Katz? 16 MS. KATZ: Sorry, I thought you were done on that 17 point about the presentation. I have a question -- a 18 clarifying question after you're done with that. Sorry. 19 A. Is this being shared now? 20 Q. (BY MR. HISER) We have a gray screen now. 21 A. Oh, it's not sharing then. 22 MS. KATZ: Perhaps while Mr. Dunham is pulling 23 that up I could ask Mr. Hiser, you identified several 24 exhibits associated with Mr. Dunham's testimony. I don't 25 see them identified in his actual direct or the testimony
670 1 Q. Yes. And then also NMOGA Exhibit 39, the New 2 Mexico Crude Oil First Purchase Price from the U.S. Energy 3 Information Administration? 4 A. Yes. Yes, sir. 5 Q. And NMOGA Exhibit 40, the FRED Graph Observations 6 from the Federal Reserve Bank in St. Louis? 7 A. Yes, sir. 8 Q. Okay. Have you prepared a summary of your direct 9 testimony for the Board this morning? 10 A. Yes, sir, I have. 11 Q. Can you please provide that summary to the Board? 12 A. Yeah. How do I -- 13 Q. Yes, do you have some slides? 14 A. I do have some slides. I don't know how to... 15 MR. HISER: Madam Hearing Officer, can you enable 16 the screen share for him? 17 Q. (BY MR. HISER) She is working on it. You should 18 see a box with a little plus, I believe. 19 A. The screen share, a box with a little plus. I'm 20 sorry, I don't see a box on mine. Oh, here it is. Yeah, 21 got it. I'm sharing a slide now. 22 Q. All right. And can you make that bigger on the 23 screen for everyone? 24 A. I'll just do that right now. 25 HEARING OFFICER ORTH: Excuse me for	672 1 that was submitted. 2 MR. HISER: These are just exhibits that were -- 3 he relied upon for some of the information seen in 4 those -- in his report. We're not -- it's only -- we just 5 listed them so people know where some of the information 6 came from. 7 MS. KATZ: But he didn't actually identify them 8 in the testimony so we would -- is that true? I -- I'm 9 just trying to figure that out. 10 Q. (BY MR. HISER) Mr. Dunham, did you rely on these 11 sources of information for part of the work that you did 12 in this presentation? 13 A. Yes. 14 Q. Okay. 15 MR. HISER: Thank you, Ms. Katz. 16 Is this the correct exhibit? 17 So we have the correct exhibit, and I believe 18 this is the one that was circulated to all parties, Madam 19 Hearing Officer. 20 Q. (BY MR. HISER) So, with that, Mr. Dunham, if you 21 could please proceed. 22 A. I apologize for the technical difficulty there. 23 Thank you -- thank you for -- for letting me testify 24 today. I am testifying on a report that I prepared for 25 the New Mexico Oil and Gas Association in relation to the

673 1 cost of the proposed ozone precursor rule. 2 My analysis showed that the rule would cost about 3 3.2 billion dollars for the New Mexico oil and natural gas 4 industry. That would be -- that would be about 3.8 5 billion over five years on a net present value basis -- 6 and the proportion of the 3.2 billion. It would mean a 15 7 percent loss in overall petroleum, oil and natural gas 8 production, with 12.9 percent of the oil and 22.8 percent 9 in the natural gas production. 10 And it also had an impact on the state's economy 11 of about 674 billion dollars per year and would lead to a 12 loss of about 3,200 jobs in the state, and the tax impact 13 on the state of about almost 23 million dollars. And that 14 doesn't -- that does not include the revenues from the oil 15 and natural gas development itself. 16 Now, all models are based on assumptions. And 17 the assumptions that I used in this model are listed on 18 this slide. The number of oil and natural gas wells I 19 understand, is in question. We derive that data from the 20 OCD Well Statistics. And I believe that the natural gas 21 well number is probably too high, from what I've seen in 22 other testing. And that doesn't -- that will change the 23 magnitude of the costs, but it doesn't really change the 24 impact, because what matters are the costs per well. And 25 as the number of wells go down, then the costs go down,	675 1 microphone on this computer. I'll do my best to speak as 2 loud as I can, if this helps. 3 Q. (MR. HISER) Go ahead. 4 A. So the assumption is also -- are based on prices 5 at the time I did the study. At that time the price for 6 oil was \$56.14 a barrel, and the price per natural gas was 7 about \$2,800 in cubic feet. 8 Our model does not account for the gas production 9 or the value of methane produced from primary oil wells, 10 and that would have some effect on the overall results. 11 The other assumptions that are used in the model 12 are that the prices that I just provided were taken from 13 March for oil, and from January for natural gas. Those 14 have changed somewhat, and as prices change either up or 15 down, it would have an effect on the overall impacts. 16 Wage rates we took from BLS wages for the State 17 of New Mexico. The most up-to-date at the time we did 18 this was in May of 2020. And for our net present value, 19 we used the high yield bond rates, which are in the 20 exhibits. Right now, interest rates are very, very low, 21 so the net present value calculations don't change much 22 depending on what interest rate is used. 23 And the most important data are operational costs 24 per facility, per well. That, we received from the NM Oil 25 and Gas Association. And that was based on a survey of
674 1 they coincide, so that would not really change the actual 2 impact dramatically, though it would change the magnitude 3 of the number. 4 HEARING OFFICER ORTH: I'm sorry to interrupt, 5 Mr. Dunham. Mr. Dunham, this is Felicia. Is there a way 6 for you to bring your voice up? We can hear you, but it's 7 a bit of a struggle. 8 COURT REPORTER: I would recommend -- excuse me, 9 this is Theresa. I would recommend getting rid of the 10 virtual background. And you're looking down all of the 11 time so you're not coming across as well. Thank you. 12 MR. DUNHAM: If I hold the microphone here, does 13 that help? 14 MR. HISER: Not too much. 15 THE WITNESS: Not too much, okay. I apologize 16 for that. I will try to speak a little louder. Is that 17 better? 18 HEARING OFFICER ORTH: It's a little better. 19 THE WITNESS: I'll do my best to speak as loud as 20 I can. 21 MS. KATZ: Some witnesses yesterday who were 22 using headphones had better luck when they didn't use the 23 headphones and just used the microphone on the computer. 24 I don't know if that's a possibility. 25 THE WITNESS: Unfortunately, I don't have a	676 1 operators in the state that they conducted. We use these 2 to -- we took this data, we ran it through a modeling we 3 developed in 2018 for the Western Energy Alliance. It's 4 a -- it's a cost model for the oil and natural gas 5 industry in New Mexico. We developed these models for 6 each state that they represented. We updated the model to 7 reflect the assumptions that I just discussed, and that 8 modeling uses data from IMLAN, which is the input/output 9 model of the United States. 10 At the time it was using the New Mexico 2016 11 tables, and we separated the costs into seven categories: 12 Exploration, permitting, drilling, completion, production, 13 pipeline transportation costs, and remediation. So each 14 individual facility would have those costs outlined, and 15 each individual well would have those costs. The revenue 16 numbers are based on those oil and natural gas price 17 numbers. They assume exponential decline in production 18 with 80 percent occurring in the first four years, and 19 then production trailing off for 20 years, until the -- 20 until the well is depleted. 21 It calculates the average profit margin for the 22 base case in the state for -- for oil and for natural gas. 23 And then we can shock that system with price changes. And 24 the price changes being the cost of the regulation, both 25 administrative and operational and capital -- I should say

677 1 administrative, operational and capital costs. And then 2 the model rebalances by shutting down the most un -- wells 3 that become unprofitable based on those changes. So it 4 shuts down the least profitable, then the next least 5 profitable, then the next least profitable, until the 6 margins balance out. 7 Those -- those costs are then fed into our 8 economic impact model of the -- of the oil and gas 9 industry -- that we produced for the Western Energy 10 Alliance in 2018. That was the last time that model was 11 updated. It's based on data from the physical location 12 and employment of all oil and natural gas operations in 13 the -- in the states that we were -- we were using it for 14 New Mexico. 15 And then, from those employment figures, the 16 supplier, the wages, output, all of those -- all of those 17 figuring are calculated, using again the 2016 tables for 18 the 2016 structure of the industry. It shocked the 19 baseline by the 15 percent -- percentage loss in revenue 20 that the cost model calculated. And the revenue is 21 directly, almost literally associated with jobs in New 22 Mexico, because most of the jobs are not higher jobs, 23 they're production jobs, and those jobs fall by about 15 24 percent. And the supplier and industry jobs are 25 calculated based on changes in -- supplier jobs are based	679 1 would see for economic impact evaluation of a new rule? 2 A. This would be what -- what -- for an economic 3 impact, it wouldn't be what you would see for a regulatory 4 impact analysis, which would be generally conducted by the 5 agency proposing the rule. 6 Q. Okay. Thank you. 7 A. At the federal level. 8 MR. HISER: I believe that's all of our direct 9 questions, Madam Hearing Officer, so we would tender 10 Mr. Dunham for any questions from the Board or other 11 parties. 12 HEARING OFFICER ORTH: Thank you, Mr. Dunham and 13 Mr. Hiser. Ms. Katz, do you have any questions of 14 Mr. Dunham? 15 MS. KATZ: I do have some, Madam Hearing Officer. 16 CROSS-EXAMINATION OF JOHN R. DUNHAM 17 BY MS. KATZ: 18 Q. Thank you, Mr. Dunham. So I just want to make 19 sure, so you had -- Mr. Hiser asked you about some 20 exhibits. And I just want to make clear, you didn't 21 actually reference those exhibits in your -- by exhibit 22 number in your testimony, correct? 23 A. No, no. Those -- those aren't referenced in the 24 report that I produced for the New Mexico Oil and Gas 25 Association.
678 1 on changes in direct output because output is the sales 2 that are used to purchase supplies for the -- for the 3 industry. 4 And then, in these jobs which are the multiplier 5 effect of the -- of the operations; the spending in the 6 general economy by people working in the -- in the 7 industry. Those jobs fall, based on the loss in direct 8 supplier wages. 9 So that is -- that is the basis of the -- of the 10 report. As the assumptions change, we can run different 11 numbers, which we -- we have done. The most important 12 values that go into the model are the price of oil and 13 natural gas and the actual costs of the regulation. 14 The number of wells -- well, again, it changes, 15 but the magnitude, it doesn't change the impact on any 16 given facility. So if we used too many wells, that the -- 17 the 3 billion dollar number we came up with is too high, 18 but what's spent on the actual production is pretty close. 19 That is my testimony. If anyone has any questions, I can 20 go into more detail. 21 Q. Mr. Dunham, this is a type of economic model that 22 you've prepared for a number of rulemaking proceedings 23 across the United States; is that correct? 24 A. Dozens, yeah. 25 Q. And this would be pretty typical of what you	680 1 Q. Okay. But the actual report doesn't identify 2 those as exhibit numbers either? 3 A. I -- no, it does not. 4 Q. Okay. Thanks. I just wanted to clarify that. 5 And then, so you -- so you cite those sources, 6 but did you -- you didn't provide any of the actual 7 numbers from those sources in your testimony, correct? 8 A. In -- in -- in -- in this -- in this testimony 9 today, or in the report itself? I'm sorry. 10 Q. In your report that is attached to your 11 testimony. 12 A. The numbers from those sources are cited in my 13 report. 14 Q. So -- so you cite -- you cite the specific 15 numbers that you used to put together what you have in 16 your tables? Did you provide that? I think you 17 referenced a cost of some number relating to natural gas 18 and I didn't see that in there. 19 A. The value -- the cost of natural gas, yeah, 20 that's -- that's in one of the tables. It's the -- 21 Q. Okay. Can you point that out to me? 22 A. -- it's the cost of the price. 23 Q. Can you just point that out to me? 24 HEARING OFFICER ORTH: Hold on, guys. We really 25 need you to speak one at a time. So just please wait for

681 1 each other. 2 A. Let me -- let me just pull that report up so I 3 have it in front of me. Am I still sharing my screen? 4 Q. (BY MS. KATZ) Yes, you are. 5 A. I am? How do I stop sharing my screen? I'm 6 sorry. This is.... 7 Q. I believe the Hearing Officer has to do that. 8 A. Those -- those prices are in Table 3 of my 9 report. 10 Q. Okay. Thank you. Thanks for pointing that out. 11 So you stated that your analysis relies on data 12 from "actual" oil and natural gas companies that are part 13 of NMOGA's membership. Did you provide any of that data 14 to the Board and the other parties as exhibits to your 15 testimony? 16 A. I -- I didn't, personally. That's -- that's 17 NMOGA's data and it's -- I -- I -- I can only share data 18 at the request of the clients. It's their data. I don't 19 know if they provided it or not. 20 Q. Okay. So -- well, they did not provide it, I 21 will say. And so, I guess, so we're just supposed to take 22 your word for that, then? 23 A. Well, it is -- it is -- again, it's a survey. It 24 comes from companies and it's outlined in Table 7. 25 Q. I understand. But so -- but we're just supposed	683 1 A. Well, I definitely agree with that. 2 Q. Okay. And did you hear the testimony of the 3 Department's modeling expert, Ralph Morris, where he 4 discussed how all of the data and inputs he used for his 5 model, as well as the modeling files themselves that were 6 provided for review by all of the stakeholders, the 7 parties, and the public in this rulemaking? 8 A. I didn't hear him. This is the first testimony 9 that I'm hearing from this ruling. 10 Q. Okay. And would you agree that it is difficult 11 to analyze the results of a model when you do not have 12 access to the underlying assumptions of that model or to 13 the data used as inputs to that model? 14 A. It's very difficult. It's almost impossible to 15 analyze a model when you don't have the data or you don't 16 have at least access to the source of it. 17 Q. Would you agree that the other parties' experts 18 have been able to testify about what they regard as 19 problems with the New Mexico Environment Department's cost 20 estimates and modeling, those put forward in this -- in 21 this rulemaking, because they had access to all the data 22 and the full explanations for where those estimates -- for 23 all of those estimates in that modeling? 24 A. I don't understand the question. 25 Q. Sorry. Yeah, that was awkward.
682 1 to take your word for what was actually in that survey, 2 and the information in that survey, and the companies and 3 the data that they provided? 4 A. Yeah. I'm under oath and I will -- I will say 5 right now, that that is the data from the survey. I 6 didn't make up -- 7 Q. All right. So were you paid by NMOGA for your -- 8 to conduct that analysis? 9 A. Yes, I was. 10 Q. And are you being paid -- paid to testify? 11 A. Yes, I am. 12 Q. Okay. So you said that this data came from ten 13 companies; is that correct? 14 A. Yes, ma'am. 15 Q. Do you know how many companies operate in the 16 State of New Mexico? 17 A. Not off the top of my head. I did actually have 18 a number, so it's a large number of companies. 19 Q. So you point to inadequacies in ERG's cost 20 estimates. Are you aware of the data and testimony 21 provided by NMED in support of those estimates? 22 A. I've seen that testimony. 23 Q. Would you agree that it is difficult to evaluate 24 an analysis when you don't have access to the data that 25 was used as the basis for that analysis?	684 1 Would you agree that the other parties are -- 2 have been able to identify what they view as problems with 3 the Department's cost estimates and modeling precisely 4 because they had access to all of the data and the 5 explanations for those estimates in modeling? 6 A. Only based on what the -- what the testimony was 7 that I was given to look at. I wasn't -- again, I wasn't 8 on the call to hear anybody. At the time I did this 9 study, there was no regulatory impact model that I could 10 find that outlined the state's cost estimates. 11 MS. KATZ: Okay. Thank you, Mr. Dunham. I have 12 no further questions at this time. 13 HEARING OFFICER ORTH: All right. Thank you. 14 Ms. Fox, do you have questions of Mr. Dunham? 15 MS. FOX: No questions. Thank you. 16 HEARING OFFICER ORTH: Thank you. Ms. Paranhos? 17 MS. PARANHOS: Thank you, Madam Hearing Officer. 18 Yes, I just have one question. 19 CROSS-EXAMINATION OF JOHN R. DUNHAM 20 BY MS. PARANHOS: 21 Q. Mr. Dunham, can you just explain whether or not 22 you applied the costs in your analysis at the well level 23 or at the well site level? 24 A. At the well level, the individual hole in the 25 ground.

685 1 MS. PARANHOS: Thank you. 2 HEARING OFFICER ORTH: All right. Thank you. 3 Mr. Jaynes? 4 MR. JAYNES: No questions, Madam Hearing Officer. 5 HEARING OFFICER ORTH: All right. Thank you. 6 Do we have Ms. Devore? I don't believe so. 7 Mr. Nykiel or Mr. Timmons? 8 MR. NYKIEL: No questions. Thank you. 9 HEARING OFFICER ORTH: Thank you. That was 10 Mr. Nykiel. 11 Mr. de Saillan? 12 MR. DE SAILLAN: Yes, I have a number of 13 questions for this witness. Thank you, Madam Hearing 14 Officer. 15 CROSS-EXAMINATION OF JOHN R. DUNHAM 16 BY MR. DE SAILLAN: 17 Q. Good afternoon, Mr. Dunham. My name is Charles 18 de Saillan. (Unintelligible.) Okay? 19 HEARING OFFICER ORTH: Mr. De Saillan, you seem 20 to have cut out. 21 THE WITNESS: Yes. 22 HEARING OFFICER ORTH: I'm wondering -- 23 MR. DE SAILLAN: Can you hear me? 24 HEARING OFFICER ORTH: Well, yes. We may have to 25 ask you to turn off your video if that continues.	687 1 costs that the oil and gas industry would incur to comply 2 with the proposed regulations. Do I have that right? 3 A. Yes, sir. 4 Q. And your report also estimates the jobs that 5 would be lost if the proposed regulations are adopted; is 6 that -- do I have that right? 7 A. Yes, sir. 8 Q. And those are costs not so much to the industry, 9 but to the larger economy? 10 A. The jobs are lost both to the industry and to the 11 larger economy. 12 Q. Okay. And then, your report also looks at the 13 tax revenue that would be lost to the state if the 14 regulations are adopted; is that correct? 15 A. Yes, sir, though -- though, I do not include the 16 taxes on oil and gas production itself, you know, the 17 royalties. 18 Q. Right, right. But you do include the tax 19 revenues that would be lost, correct? 20 A. Sure. Yes, I do. 21 Q. And those again, those are costs to the larger 22 economy, correct? 23 A. Yes, sir. 24 Q. Okay. Now, Mr. Dunham, do you acknowledge that 25 oil and natural gas production results in the emission of
686 1 Q. (BY MR. DE SAILLAN) Can you hear me now? 2 A. Yes, that's better. Thank you. 3 Q. Okay. Thank you. 4 MR. DE SAILLAN: Thank you, Madam Hearing 5 Officer. 6 Q. Good morning, Mr. Dunham. 7 A. Morning, sir. 8 Q. My name is Charles de Saillan and I'm an attorney 9 with the New Mexico Environmental Law Center. And I 10 appreciate your testimony. I want to start out by 11 emphasizing that I'm having a rather hard time hearing 12 you. So I would very much appreciate it if when you 13 respond to my questions, you try to be as -- enunciate as 14 well as you can and speak -- try to speak loudly. 15 A. I apologize for that, sir. 16 Q. It's no problem, it's just, you know, this is 17 technology. 18 A. This is technology, exactly. 19 Q. And I'm not as young as I used to be, and there 20 were some rock concerts in my youth so my hearing isn't 21 what it once was. 22 But I want to start out by asking you a few 23 questions about your report and what you're looking at in 24 your report just to make sure I understand. Now, as I 25 understand your report, you're looking at the additional	688 1 oxides of nitrogen and volatile organic compounds? 2 A. I'm not a chemist or an engineer, sir, but I 3 would -- I would -- I would assume that the oil and 4 natural gas production does lead to emissions. 5 Q. Okay. And then those -- those pollutants form 6 ozone in the atmosphere; do you more or less recognize 7 that? 8 A. I'm not a chemist, sir. I -- I don't know 9 what -- how those pollutants function. 10 Q. Right, I understand. And I'm not asking for 11 your -- your expertise as a chemist or chemistry. I'm 12 just trying to lay a basic foundation about what this 13 hearing is all about. And then, do you understand that 14 these substances are pollutants that are harmful to human 15 health? 16 A. Again, sir, I'm not a doctor, I don't know how 17 pollutants or -- would affect human health. I'm an 18 economist, I -- I work with economic data. 19 Q. Okay. Then you wouldn't dispute any of these 20 facts? 21 A. I -- I -- I can't accept or dispute them. I'm 22 not an expert in -- in atmospheric chemistry. 23 Q. Okay. Well, then, Mr. Dunham, would you agree -- 24 let's assume that these facts are correct. Okay? Can we 25 take them as a given?

689 1 A. Yes, sir. 2 Q. Okay. Now, given what we just discussed, would 3 you agree that the emission of these pollutants has costs 4 to other sectors of the New Mexico economy, other than the 5 oil and gas industry? 6 A. In general, pollutants of all types have what 7 economists would call externalities. So if you're 8 located -- maybe your house is located under an airport, 9 you have externalities due to the sound and the emissions 10 from airplanes, and that would be priced in, you know, the 11 property value of your -- of your property. You would 12 have a lower property value than one that would not be 13 under an airport runway. So it would be the same sort of 14 thing. 15 Q. Okay. And so I want to -- I'm going to get into 16 externalities with you in a bit, but I just want to -- I 17 just want to establish that there are costs to other 18 sectors of New Mexico economy as a result of the release 19 or the emissions of these pollutants. And when I say 20 other sectors, I mean other than the oil and gas industry; 21 is that correct? 22 A. If -- if -- if the statements that you made were 23 true, again, I can't vouch for that, then that would lead 24 to other -- other costs. 25 Q. Okay. Now, let's take a couple of examples. For	691 1 costs, does it? 2 A. No, that wasn't the -- that wasn't my -- my 3 commission. 4 Q. Okay. Now, aside from those costs, the ones that 5 I just asked you about, wouldn't you also agree that there 6 are benefits in breathing clean air, that are very 7 difficult to quantify in this sort of economic analysis? 8 A. In the type of analysis I perform? 9 Q. Yes. 10 A. Again, I didn't do a regulatory impact analysis. 11 A regulatory impact analysis would take into account all 12 of those social-type aspects. 13 Q. Right. Okay. So, Mr. Dunham, is it -- is it 14 your understanding that oil and natural gas production 15 also results in the emission of methane into the 16 atmosphere? 17 A. Well, natural gas basically is methane, so it 18 would be possible. Again, I'm not an engineer so I'm -- 19 I'm not an expert in this. 20 Q. Okay. And do you acknowledge that methane is a 21 potent greenhouse gas? 22 A. I have no idea on that. 23 MR. HISER: Madam Hearing Officer? 24 A. I'm not an environmental scientist. 25 HEARING OFFICER ORTH: Hold on. Hold on one
690 1 example, the emission of harmful pollutants would result 2 in increased medical bills, right? 3 A. It's possible. 4 Q. Okay. But your report doesn't include those 5 costs, does it? 6 A. No, my report was to look at the costs of the 7 regulation on the production of oil and natural gas. 8 Q. Right. And -- and emission of harmful pollutants 9 could result in lost days of work due to illness; is that 10 correct? 11 A. Again, that -- that is possible. 12 Q. Okay. But your report doesn't attempt to 13 quantify those costs either, does it? 14 A. Again, it was my job to calculate costs of the 15 regulation. It would be a -- it would be a regulatory 16 impact analysis that would look at externalities and 17 social costs, potential benefits, et cetera. 18 Q. Okay. And emission of harmful pollutants could 19 result in higher mortality rates; is that also correct? 20 A. Again, based on what you've suggested as a given, 21 if pollutants cause health problems that could result in 22 various types of health problems, including possibly 23 mortality, I would think. But, again, I'm not a 24 physician, I don't have any expertise in this. 25 Q. Okay. But your report doesn't include those	692 1 second. I heard an objection of some kind. 2 MR. HISER: Yes, Madam Hearing Officer. This is 3 Eric Hiser for NMOGA. Mr. Dunham has repeatedly stated 4 that he conducted a cost analysis of the cost of this rule 5 on the oil and gas industry, that he did not conduct a 6 regulatory impact analysis looking at all of the other 7 conceivable costs and benefits of the rule. We could go 8 through and try to identify all of those, but I think the 9 question has been asked and answered. 10 HEARING OFFICER ORTH: Mr. de Saillan? 11 MR. DE SAILLAN: Yes, Madam Hearing Officer. 12 Mr. Dunham has gone into a fair amount of detail in 13 estimating what he considers to be the costs of this 14 proposed rule. And I think -- and I think that's -- 15 that's legitimate information for the -- for the -- for 16 this Board to hear. But on the same token, I think it's 17 been entirely appropriate that the Board hear what his 18 report does not include. And I am going into a little bit 19 of detail on that, but not nearly as much detail as 20 Mr. Dunham has gone into. And, again, I think that it's 21 important for the Board to understand what is not in his 22 report. 23 HEARING OFFICER ORTH: I understand that. Keep 24 going, if you would. I think -- I think that's an 25 appropriate line of inquiry. I'm sorry for interrupting

693 1 you, Mr. Dunham. 2 MR. DE SAILLAN: Thank you, Madam Hearing 3 Officer. 4 Q. (BY MR. DE SAILLAN) Now, if we could go on. I 5 think your report states -- well, your report does state, 6 and I'm going to quote at page 8 of your report, which is 7 attached to your testimony -- attached to your written 8 testimony. It says, "Based on the Western Energy model, 9 if the costs outlined above are reflective of the entire 10 industry in the State of New Mexico, the results would be 11 devastating for the oil and natural gas sector of the 12 economy." Do you recall that statement, Mr. Dunham? 13 A. I can look for the exact wording, but that would 14 be -- that would be a true statement. 15 Q. Okay. Now, would you agree with me that if 16 climate change caused by anthropogenic emissions of 17 greenhouse gas into the atmosphere is left unchecked, the 18 results would be devastating for the New Mexico economy as 19 a whole? 20 A. I don't even understand the question, sir. 21 Q. Let me repeat it. Would you agree with me that 22 if climate changes caused by the anthropogenic emissions 23 of greenhouse gas into the atmosphere is left unchecked, 24 the results would be devastating for the New Mexico 25 economy?	695 1 service, and are, thus, borne by other sectors of the 2 economy or by the public at large. Is that accurate? 3 A. Roughly; they're the costs that are not 4 associated with the market transaction. 5 Q. Right. 6 A. So the -- it would be both the production and the 7 consumption of a good or service. 8 Q. Okay. And do you agree that environmental 9 pollution is an example of an externality? 10 A. Environmental pollution or pollution of any type 11 is generally considered in a regulatory impact analysis 12 as -- pollution as an externality. 13 Q. Right, okay. And in fact, it's often used as a 14 textbook example of an externality, isn't it? 15 A. It's used as -- it's a common issue which is an 16 externality, yeah. 17 Q. Okay. And would you agree that installation of 18 pollution control equipment is a means of internalizing 19 external costs? 20 A. I'm -- I'm not an engineer, so I don't know how 21 the pollution control equipment would work, but it would 22 internalize external costs by -- you could -- you could 23 actually say, internalize external costs by a number of 24 means, including pricing or equipment or different 25 systems.
694 1 A. I can't even answer that question. 2 Q. Okay. 3 MR. HISER: Madam Hearing Officer, this is Eric 4 Hiser again. 5 HEARING OFFICER ORTH: Yes, sir. 6 MR. HISER: I can appreciate your desire to let 7 everything into the record as much as possible, but I do 8 think we need to caution the Board about testimony by 9 counsel as to the -- these costs, because none of these 10 are in evidence yet. 11 HEARING OFFICER ORTH: Okay. No, I -- I take 12 your point. And Mr. De Saillan is going to have to find a 13 basis for the assumptions and -- the basis, again, for the 14 assumptions in the questions he's posing. And I will be 15 paying attention to that, but it's -- it's a long record, 16 so I trust he's -- I trust he's going to be able to do 17 that later, but thank you for -- thank you for reminding 18 us. 19 Go ahead, Mr. De Saillan. 20 MR. DE SAILLAN: Thank you, Madam Hearing 21 Officer. 22 Q. (BY MR. DE SAILLAN) Now, Mr. Dunham, you 23 mentioned a minute ago the concept of externalities. I 24 want to talk to you a little about that. The term refers 25 to costs that are external to the price paid for goods or	696 1 Q. Okay. So that would include installation of 2 pollution control equipment? 3 A. Potentially. I'm not an engineer, so I don't 4 know how pollution control equipment would affect actual 5 pollution. 6 Q. But if the pollution control equipment reduces 7 the emission of pollution, that would reduce the 8 externality, right? 9 A. Potentially, yes. 10 Q. Okay. And that way the total costs of producing 11 a good are more accurately reflected in the price paid to 12 that good; is that right? 13 A. If externalities are reduced, then the market 14 transaction is more reflective of the -- the overall 15 supply and demand of costs and -- and, yeah, costs of a 16 good or service. 17 Q. Okay. Now, Mr. Dunham, your report includes the 18 costs to the industry of pollution control equipment that 19 would be required under these regulations; is that 20 correct? 21 A. Yes, sir. 22 Q. Okay. And your report states -- and this is at 23 page 5, that "Under the proposed regulations there would 24 be as many as 16 provisions that will require additional 25 equipment to be installed and maintained." Do you recall

697 1 that statement? 2 A. I'm looking for it now, but that -- that 3 sounds -- yes, that's actually what it does say. You're 4 correct. 5 Q. Okay. And could you tell us what some of that 6 equipment would be? 7 A. It's outlined in Table 7 of my report; it's 8 things like compressors, flares, paper recovery units, et 9 cetera. 10 Q. Okay. And zero emission controllers, was that 11 another one? 12 A. I do not know because I'd have to go back and 13 look at the actual raw data and see if I combined that 14 into something. It's not on my table. 15 Q. Okay. Okay. That's okay. 16 Now, that equipment will need to be manufactured; 17 is that correct? 18 A. I would assume so, yes. 19 Q. And -- and the manufacturer of that equipment 20 will create jobs; is that right? 21 A. The manufacturer of that equipment would create 22 jobs. 23 Q. But your report doesn't include those additional 24 jobs, does it? 25 A. My -- my report is not a report on the emission	699 1 Q. Okay. And that -- and that maintenance will 2 create jobs? 3 A. It would -- it would create activity; whether or 4 not it would create new jobs, again, I can't tell you 5 because I haven't examined that. 6 Q. Okay. And the manufacturer and installation of 7 the pollution control equipment will also create tax 8 revenues; is that correct? 9 A. Potentially. Again, that equipment could be 10 manufactured completely outside of New Mexico. I don't -- 11 I didn't examine the pollution equipment industry in this 12 state. 13 Q. Okay. But the installation would create tax 14 revenues in New Mexico, correct? 15 A. Again, potentially. I don't know how that 16 would -- how the structure of this reflects on New 17 Mexico's tax revenue of the state. 18 Q. Okay. But your report doesn't consider those -- 19 those savings, does it? 20 A. My report was to look at the cost of the New 21 Mexico oil and gas industry, not on the pollution control 22 industry. 23 Q. Yeah, okay. 24 Now, Mr. Dunham, I presume that you're familiar 25 with cost/benefit analysis?
698 1 control industry. It's a report on the New Mexico oil and 2 natural gas industry. 3 Q. Okay. And -- and the equipment will need to be 4 installed; is that correct? 5 A. I would assume so. 6 Q. And that installation will create jobs, won't it? 7 A. That will also create costs because the 8 installation of that equipment is part of it. 9 Q. Right, but my question is -- my question is 10 whether it will create jobs? 11 A. Installing equipment? 12 Q. Yes. 13 A. Installing equipment would lead to jobs; whether 14 or not it would create it, I don't know. I haven't 15 examined that. 16 Q. Okay. And that equipment will need to be 17 maintained as well, won't it? 18 A. I would assume so, but, again, I'm not an 19 engineer. I don't know how the equipment works. 20 Q. I'm sorry? 21 A. I'm sorry. I'm just -- the technology is not 22 great. I'm not an engineer, I don't know how the 23 maintenance schedules for this type of equipment works, 24 but I would assume that there would maintenance on any 25 kind of equipment.	700 1 A. Yes, sir, I am. 2 Q. And could you explain to the Board what 3 cost/benefit analysis is in economic terms? 4 A. Cost/benefit analysis is really a business -- a 5 business concept. It's an examination of the -- of the 6 various costs going into a -- we would say a production 7 function, but into an activity. In this case, say, 8 drilling of oil or natural gas. And the benefits would be 9 the resultant revenues that one would make from that, in 10 that well. So if your costs are higher than your 11 benefits, then you don't drill that well, which is kind of 12 what our model is based on. 13 Q. Now, your report, as I understand it, and I think 14 as you've testified is more a cost analysis or a cost 15 impact analysis, rather than a cost/benefit analysis; is 16 that correct? 17 A. That is correct, sir. 18 Q. But your firm -- your firm does do cost/benefit 19 analysis, right? 20 A. Yes, it does. 21 Q. And indeed, your firm's brochure states that 22 cost-benefit analysis is one of the services that it 23 provides; is that correct? 24 A. Yes, sir. 25 Q. And have you, personally, prepared cost/benefit

701 1 analyses? 2 A. Very many of them. 3 Q. Okay. And so, I'd like to ask you, why was it 4 you decided to conduct a cost analysis here rather than a 5 cost/benefit analysis? 6 A. I didn't decide what type of analysis to conduct. 7 I'm a -- I'm a consultant. I received a commission and I 8 performed that analysis. 9 Q. Okay. Thank you. 10 And then a couple of questions about your model. 11 You referenced a Western Energy Alliance modeling in your 12 report; is that correct? 13 A. Yes, sir. 14 Q. And could you tell us what Western Energy 15 Alliance is? 16 A. Western Energy Alliance is a trade association 17 representing the oil and natural gas industry in -- I'm 18 going to get this wrong, I'm sorry; I think it's 12 or 13 19 states. 20 Q. Okay. And most of the figures that you show in 21 your report are the products of that model? 22 A. Some of the figures are; the economic impact 23 figures are. 24 Q. Okay. Now, is that model itself in the record in 25 this proceeding?	703 1 MS. WITHERSPOON: No questions. Thank you. 2 HEARING OFFICER ORTH: Thank you. We're going to 3 turn now to the Board for their questions. While I'm 4 doing that, if you are an attendee on this platform and 5 you would have a question, please reach out through the 6 Chat. 7 So let's start with Madam Chair, do you have 8 questions of Mr. Dunham? 9 CHAIRPERSON SUINA: Thank you, Madam Hearing 10 Officer. Yes, I do have a few question of our witness, 11 Mr. Dunham. 12 EXAMINATION BY THE BOARD OF JOHN R. DUNHAM 13 CHAIRPERSON SUINA: First of all, good morning, 14 Mr. Dunham. Thank you for your presentation and all of 15 the information that you've provided us this morning as 16 well as your written testimony and report. Appreciate 17 your time and also patience. This is a lot of information 18 to try to weed through and look back at the basis of the 19 assumptions and the model itself. 20 I just have a couple of clarifying questions in 21 my mind, just so that I'm clear on how the model was put 22 together. And, again, some of the initial assumptions. 23 So based on your presentation slides this morning, you 24 said the model was developed for Western Energy Alliance 25 in 2018. And that was really just the structure or how
702 1 A. The citation to the model is in my report. 2 Q. But is the model itself in the record? 3 A. The entire model, no, it's not owned by anybody 4 involved in this proceeding, I don't believe. 5 MR. DE SAILLAN: Okay. Mr. Dunham, thank you for 6 your patience with me here today. I have no further 7 questions. 8 THE WITNESS: Thank you, sir. I'm sorry about 9 the volume. 10 HEARING OFFICER ORTH: Thank you, Mr. de Saillan. 11 Mr. Rose, do you have questions of Mr. Dunham? 12 MR. ROSE: I do not. 13 HEARING OFFICER ORTH: Thank you. Mr. Janoe? 14 MR. JANOE: I do not. 15 HEARING OFFICER ORTH: Thank you. Mr. Butzier? 16 MR. BUTZIER: No. Thank you, Madam Hearing 17 Officer. 18 HEARING OFFICER ORTH: Thank you. Ms. Gutierrez? 19 MS. GUTIERREZ: No questions. Thank you. 20 HEARING OFFICER ORTH: Thank you. Let's see. Do 21 we have Mr. Neumann or Mr. Colclasure? 22 MR. COLCLASURE: This is Mr. Colclasure, we have 23 no questions. Thank you. 24 HEARING OFFICER ORTH: Thank you. And 25 Ms. Witherspoon?	704 1 the model was created; is that -- is that correct? 2 MR. DUNHAM: The structure of the model and also 3 the baseline economic impact figures were from 2018 in 4 that model. 5 CHAIRPERSON SUINA: Okay. So the baseline 6 economic data is from 2018, then; is that what you're 7 saying? 8 MR. DUNHAM: The job data, the wage data, yes, 9 that is from there. 10 CHAIRPERSON SUINA: Okay. And -- and in your 11 report in the tables, so back to like the job data and so 12 forth; in some of the tables, for example, Table 12, it 13 refers back to an update to the economic impact -- 14 Oh, Madam Hearing Officer, I just want to make 15 sure, it's okay to refer to the report -- to his report; 16 is that -- is that? 17 HEARING OFFICER ORTH: Yes, I think it's okay. 18 CHAIRPERSON SUINA: Okay. I just want to make 19 sure. 20 So in Table 12 of your report, we're looking at a 21 comparison of economic impacts from 2020 to 2021. But 22 that economic analysis was done based upon updated job 23 data or 2018 job data? 24 MR. DUNHAM: No, everything is based on 2018 job 25 data.

705 1 CHAIRPERSON SUINA: Oh, okay. Including that 2 update on the tables? 3 MR. DUNHAM: Yes, ma'am. 4 CHAIRPERSON SUINA: Okay. All right. Well, I 5 appreciate that clarification. 6 And is that the same assumption for the other 7 tables in your report, like Table 10, 11 and Table 9? 8 MR. DUNHAM: Give me one second. Table 9, yes. 9 CHAIRPERSON SUINA: Okay. 10 MR. DUNHAM: Table 10 and Table 11 are data that 11 we -- that we gathered based upon the -- the wording of 12 the rule when we did this analysis a year ago, and when we 13 did this analysis this time. And -- and some different 14 pricing data, things like that; it's not the -- it's not 15 job data, no. 16 CHAIRPERSON SUINA: Okay. So you're saying in 17 some of these tables there were updates on the base 18 assumptions of jobs and some prices; is that what you're 19 saying? 20 MR. DUNHAM: Not jobs, but on some prices, and 21 that is all in Table -- let me just look through this 22 myself -- Table 3. 23 CHAIRPERSON SUINA: Can you repeat that table 24 number? Sorry, I didn't hear it. 25 MR. DUNHAM: Sorry, Table number 3.	707 1 you for that, Mr. Dunham. Again, sorry, I'm trying to 2 walk through all of this data and where all of it's coming 3 from and base assumptions. I appreciate your patience 4 with me. 5 So I understand that in your report, I think it 6 was in Table -- sorry, I'm scrolling through here really 7 quickly. Oh, yes, it was in -- on page 8 and page 9 in 8 your report. Some of the changes that you referenced from 9 the prior analysis, and you examined the two regulations, 10 one going through the OCC and then one going through EIB. 11 And so, in your -- in your subsequent tables, does that 12 already take into consideration the rules that were passed 13 under OCC? 14 MR. DUNHAM: The -- the earlier analysis was 15 looking at those rules, as well as an earlier version, I 16 believe, of this rule. 17 CHAIRPERSON SUINA: Okay. And then the 2021 18 results that are in Tables 10 and 11 and 12, are those -- 19 does that include the -- your analysis about the impact 20 with the OCC rules? 21 MR. DUNHAM: No, it does not. No, that's just 22 looking at this rule. 23 CHAIRPERSON SUINA: Okay. It's just looking at 24 the EIB rule? 25 MR. DUNHAM: Correct.
706 1 CHAIRPERSON SUINA: Three, okay. Okay. I 2 appreciate that. And so in Table number 3, you're saying 3 the updated price data that was referenced in Table number 4 3 -- and I think in your slides earlier, it -- is that the 5 data that was based upon the operational cost -- some of 6 the data based upon the operational costs from the survey 7 of the ten companies? 8 MR. DUNHAM: No, ma'am. This is data based on -- 9 on information from the U.S. Department of Energy and 10 based on information that -- that we interpreted from -- 11 from the State of New Mexico, though I've been told that I 12 interpreted the natural gas wells incorrectly. 13 CHAIRPERSON SUINA: Okay. So that interpreted 14 data from New Mexico, you're saying -- can you repeat that 15 last part again? Sorry, it was kind of mumbled. 16 MR. DUNHAM: Yeah, the number of actual wells -- 17 the number of actual facilities is from -- is from the 18 State of New Mexico, but, again, I've been told I 19 interpreted the number of gas wells in particular 20 incorrectly. 21 CHAIRPERSON SUINA: Okay. And can you explain a 22 little bit more of how that interpretation, was it an 23 overestimate or an underestimate? 24 MR. DUNHAM: It's an overestimate. 25 CHAIRPERSON SUINA: An overestimate, okay. Thank	708 1 CHAIRPERSON SUINA: Okay. Thank you for that 2 clarification. Again, I apologize for all of these 3 questions. 4 MR. DUNHAM: Not at all. 5 CHAIRPERSON SUINA: And -- and so in one of the 6 other statements in your report is that the estimated 7 administrative costs of the rule has risen based not only 8 on the higher wages in New Mexico, but because the 9 proposed rule imposes more administrative requirements. 10 And I just wanted to, again, take note, is that 11 administrative cost, the assumption, based upon job data 12 from 2018 or 2021? 13 MR. DUNHAM: No, the administrative cost 14 assumptions are based on a similar rule that had been 15 proposed by the U.S. EPA. And I'm going to get the date 16 wrong, I think it was 2016. And we took those and applied 17 the current New Mexico -- those hours and applied the 18 current New Mexico wage rates to -- and the -- and the 19 number of regulations. So the hours per administrative 20 task, times the number of administrative tasks, times an 21 average wage. 22 CHAIRPERSON SUINA: Okay. Well, thank you for 23 that. And then in Table 11, it talks about the 24 operational and the administrative costs, and it compares 25 the 2020 model to -- or numbers to the 2021. And I see a

709 1 percentage change of administrative costs of 28.9 percent? 2 And then -- 3 MR. DUNHAM: Yeah, that's it. 4 CHAIRPERSON SUINA: Sorry about that. And then 5 an operational cost of negative 2.5 percent. And so, 6 could you explain a little bit more of why -- or explain, 7 one, maybe the easy one is why the operational costs went 8 down? 9 MR. DUNHAM: Yeah, the operational costs went 10 down based on the number of wells that we were looking at, 11 as well as the -- as well the -- (unintelligible) 12 HEARING OFFICER ORTH: Mr. Dunham? Mr. Dunham? 13 Mr. Dunham, I'm sorry, we cannot hear you. Would you -- 14 when you were leaning forward it was better. 15 MR. DUNHAM: Oh, okay. Is this better? Is this 16 better? 17 HEARING OFFICER ORTH: Yes, it is. 18 MR. DUNHAM: Okay. I really apologize for the 19 technology. I'll get new headphones. 20 The operational costs changed -- it's a small 21 change that's based on the number of wells that we were 22 looking at, changed and some of -- I believe some of the 23 pricing changed a little bit. 24 CHAIRPERSON SUINA: Okay. Thank you so much. 25 And so then the administrative costs that went up 28.9	711 1 make sure I understand what the tables are comparing. And 2 so the 2020 table does include both and the 2021 doesn't 3 include both? 4 MR. DUNHAM: The 2020 includes a -- it includes 5 just this case of the rule in conjunction with both, but 6 we ran the models together so it kind of doesn't really 7 work out that way. 8 CHAIRPERSON SUINA: Okay. Madam Hearing Officer, 9 I think that's all I have for right now. And I may have a 10 little bit more questions depending on what the other 11 Board members ask. Thank you so much. 12 HEARING OFFICER ORTH: Thank you, Madam Chair. 13 Vice-Chair, Trujillo-Davis, do you have questions 14 of Mr. Dunham? 15 Oh, we can't hear you. You're unmuted on my 16 platform, but there may be a setting on your computer. 17 And now your screen is frozen. How about we turn off your 18 video? 19 Okay. Vice-Chair Trujillo-Davis seems to have 20 frozen in time. Give her just a moment. All right. This 21 may take more than a moment. Ms. Trujillo-Davis, if you 22 can hear me, it may help for you to leave the platform and 23 come back in. That worked for another panelist this 24 morning. 25 Member Cates, do you have questions of
710 1 percent; you're saying that was based on more the labor 2 hours and the increase in wages; is that -- is that 3 accurate? 4 MR. DUNHAM: Both. It's both. 5 CHAIRPERSON SUINA: Both, okay. All right. 6 And -- and so I know you have another -- so I'm going 7 through the tables here; Table 12, so you have the 2021 8 comparison with the 2020 analysis. And, again, I'm just 9 wanting to make sure I have it clear in my head. So this 10 2020 analysis was based upon the previously proposed 11 rule -- rule that was back in last year, basically, the 12 previous version? 13 MR. DUNHAM: Yeah, but it was the previous 14 version in -- in -- in conjunction with the other rule. 15 CHAIRPERSON SUINA: Okay. And then -- and then 16 so, therefore, the 2021 version, is that comparing the 17 passing of the other -- the OCC rule and the EIB rule or 18 just the EIB? 19 MR. DUNHAM: That's just the EIB rule. 20 CHAIRPERSON SUINA: Okay. So it doesn't include 21 both, whereas the 2021 did include both? 22 MR. DUNHAM: The 2021 is a separated -- is what 23 we separated out as this rule from that rule. Again, it 24 was -- it's a very different analysis. 25 CHAIRPERSON SUINA: Okay. Okay. I just want to	712 1 Mr. Dunham? 2 BOARD MEMBER CATES: Yeah. Can you hear me okay? 3 Everything working? 4 HEARING OFFICER ORTH: I can. 5 BOARD MEMBER CATES: Yeah, Mr. Dunham, so a 6 couple of quick ones just to follow up on what -- on what 7 Mr. -- and I'm sure I'm butchering his name and I just 8 have to get a document in front of me before I -- to 9 follow up on what Mr. De Saillan was saying. So around 10 the notion of the job effects. So if we look at this rule 11 as essentially an enlarged sort of -- something that would 12 trigger a large sort of private sector infrastructure 13 project through the tightening of a leaky system, then it 14 seems to me it would create a whole variety of jobs that 15 would include like, I don't know, welding pneumatic 16 controller skilled sorts of adjustments. And generally it 17 would in some ways actually be a plus to the economy, in 18 terms of job creation around infrastructure improvements. 19 And as a point of clarification, I wanted to make 20 sure that you didn't go there in your report; is that 21 right? 22 MR. DUNHAM: No, I didn't. However, that's 23 something that the economists call the broken window 24 fallacy. So those kinds of jobs would be created. It's 25 the same thing as if you break windows, you create jobs

713 1 for wages. But it doesn't -- yeah, it doesn't have an 2 overall effect because you're taking away jobs from 3 somebody else. 4 BOARD MEMBER CATES: So it would be your 5 contention that this rule is not in any way a job creator; 6 is that correct? Is that -- is that your point of view? 7 MR. DUNHAM: It wouldn't generally be a job 8 creator, no. 9 BOARD MEMBER CATES: And so another question I 10 had. 11 MR. DUNHAM: I'm sorry, I meant a net job creator 12 on that. 13 BOARD MEMBER CATES: I'm sorry, say again. 14 MR. DUNHAM: A net job creator. It would create 15 certain jobs, but it would take away other jobs. 16 BOARD MEMBER CATES: And you don't know what 17 the -- do you have a feeling for what the net effect would 18 be? 19 MR. DUNHAM: No, sir, I wasn't -- I wasn't asked 20 to look at that. 21 BOARD MEMBER CATES: Is that -- I'm sorry. Is 22 that a no? 23 MR. DUNHAM: It's a -- it's a no. 24 BOARD MEMBER CATES: You don't have a feeling. 25 So you don't have a feel for what the net job impact would	715 1 MR. DUNHAM: No, the model is based on current 2 prices in New Mexico for both oil -- (unintelligible.) 3 BOARD MEMBER CATES: Wait. And so that was -- 4 was that in 2018? 5 MR. DUNHAM: No, the -- 6 HEARING OFFICER ORTH: Hold on. I'm sorry. I'm 7 sorry to interrupt. Theresa, where did you lose them? 8 COURT REPORTER: Okay. In the last answer, it 9 was, "No, the model is based on current prices in New 10 Mexico for both," and then I did not hear you. 11 MR. DUNHAM: I'm sorry, ma'am. Oil and natural 12 gas. 13 BOARD MEMBER CATES: And that was in 2018, right? 14 MR. DUNHAM: No, sir, that was current prices. 15 That was current at the time I did the model. 16 BOARD MEMBER CATES: And so, okay. You said 17 current prices at the time you did the model. When -- 18 what was the time frame when you did the model? 19 MR. DUNHAM: I believe I have the -- the prices 20 were from, I believe -- I can look back in my testimony, I 21 think March and January for the oil, March -- and January 22 for natural gas. 23 BOARD MEMBER CATES: Yeah. 24 MR. DUNHAM: Of this year. 25 BOARD MEMBER CATES: So I was just wondering, so
714 1 be from this rule. Okay. So -- so one of the other 2 things you mentioned was that -- that this is going to 3 cost the industry a certain -- a huge amount of money. I 4 think you said something on the range of 30 billion 5 dollars and that's based on your assessment of information 6 from ten different companies. Do I have that about right? 7 MR. DUNHAM: I believe it was 3 billion dollars 8 that it works out from the cost information. 9 BOARD MEMBER CATES: Okay. Well, that's a big 10 difference, but 3 billion dollars is still a lot of money. 11 Did you happen to calculate that number in terms 12 of what's -- you know, what is that in terms of the 13 percentage effect on the bottom line of the industry? Is 14 it 10 percent? 15 MR. DUNHAM: I don't know that off the top of my 16 head. I could -- I could calculate that if you would 17 like, and I could send you something. I don't have that 18 off the top of my head. 19 BOARD MEMBER CATES: I just wondered like, so 20 it's a raw number that's hard to put into context, without 21 knowing like what is the exact -- you know, what is that 22 in terms of the percentage of the bottom line of the 23 industry. And then, I wanted to tie that to -- so you -- 24 you did your numbers based on 2018 prices for, say, West 25 Texas Intermediate Crude and Henry Hub prices, right?	716 1 the price of natural gas today is \$5, I think, which is 2 roughly double what it was at the time that you did your 3 study. West Texas Intermediate today is \$75, which is up 4 considerably from that time. And so my question is, with 5 -- would these higher prices mitigate the numbers? Would 6 it change the numbers, in terms of the net impact on the 7 oil industry? That is, would they change the numbers in 8 your report? Would the higher prices affect the bottom 9 line of the changes that are being proposed? 10 MR. DUNHAM: Higher prices would affect the 11 bottom line; not necessarily Henry Hub or WTI stock 12 prices, but the wellhead prices in New Mexico, which are 13 up since we did the report. 14 BOARD MEMBER CATES: Yeah, okay. That's all I 15 have. I appreciate you testifying today and thank you. 16 HEARING OFFICER ORTH: Thank you, Member Cates. 17 Let's return to Vice-Chair Trujillo-Davis. I'm glad you 18 were able to get back on. 19 Oh, no, I'm sorry, we can't hear you. You're 20 unmuted on the platform. 21 VICE-CHAIR TRUJILLO-DAVIS: Can you hear me okay 22 now? 23 HEARING OFFICER ORTH: It's very low, very low. 24 VICE-CHAIR TRUJILLO-DAVIS: Okay. I'll take the 25 next turn.

717 1 HEARING OFFICER ORTH: Okay. Let's see. Let's 2 go to Member Bitzer. 3 BOARD MEMBER BITZER: Can you hear me okay? 4 HEARING OFFICER ORTH: Yes, very clearly. 5 BOARD MEMBER BITZER: I've got the fantasy 6 speaker going here that I can move closer to my head and 7 farther away when we have somebody who is very soft. 8 Real quick, first of all, why -- why didn't you 9 look at the royalties loss component? Is that an involved 10 analysis or just outside the scope of your work? 11 MR. DUNHAM: It was outside of the scope of my 12 work. 13 BOARD MEMBER BITZER: Any rough estimate off the 14 top of your head, what those might be? 15 MR. DUNHAM: No, sir, I don't have that. 16 BOARD MEMBER BITZER: You do this for a living, 17 you've done it for a long time. You've got great 18 credentials. I'm wondering if you have sort of a ballpark 19 in mind for what -- because I imagine these figures -- 20 your -- your data is or your results are subject to ebb 21 and flow based on the price of a barrel of oil, for 22 example, or a cubic yard of natural gas. But what 23 would -- let's stick with oil for a minute here. What 24 would a -- what would a \$10 increase or a \$10 decrease -- 25 a \$10 delta do to -- to these figures? How substantially	719 1 state does an analysis -- the state budget people have an 2 analysis for it by the dollar, I think, with regards to 3 the price of oil. But I imagine it's not -- it's not 4 linear either, but they've figured it out for the full 5 range over the years, or they tried to anyway. 6 That's all I have. Thank you. 7 HEARING OFFICER ORTH: All right. Thank you, 8 Member Bitzer. 9 Vice-Chair Trujillo-Davis, I understand we may be 10 able to hear you now. 11 VICE-CHAIR TRUJILLO-DAVIS: Can you hear me now? 12 HEARING OFFICER ORTH: Terrific. Thank you very 13 much. Okay. Go ahead, please. 14 VICE-CHAIR TRUJILLO-DAVIS: Great. Thank you. I 15 apologize for that. I just had a couple of clarifying 16 questions, Mr. Dunham. You mentioned that the data that 17 you used for your report, you gathered from a survey of 18 NMOGA members; is that correct? 19 MR. DUNHAM: It came from a survey of NMOGA. 20 Yes, it came from a survey of NMOGA members. 21 VICE-CHAIR TRUJILLO-DAVIS: And can you give us 22 some insight to what that survey -- what kind of questions 23 that survey asked? 24 MR. DUNHAM: I don't have that in front of me. 25 It was -- it was a cost survey of various components. But
718 1 would they change? 2 MR. DUNHAM: The figures would -- the figures 3 would definitely change based on the -- on the change in 4 the price. It really depends on -- the model itself is 5 not linear, so I'd have to actually run it through the 6 model to see. But you can -- you can definitely, as 7 prices go up, it's going to have a -- it's going to have a 8 positive effect on the industry. I mean, I'd say a 9 negative effect on our impact. 10 BOARD MEMBER BITZER: So if the prices -- 11 MR. DUNHAM: Meaning that is less. 12 BOARD MEMBER BITZER: Yeah. If the price were to 13 go up, it could offset some of your projected losses then? 14 MR. DUNHAM: Correct, and if it was to go down it 15 would be the opposite. 16 BOARD MEMBER BITZER: And your analysis is 17 static? It assumes the -- the price at, \$55 a barrel? 18 MR. DUNHAM: Yeah, about 56. 19 BOARD MEMBER BITZER: Okay. So \$56 a barrel. 20 But no guesstimate if it went to \$65 dollars a barrel, how 21 much the negative impact would be reduced? 22 MR. DUNHAM: I -- I honestly can't give you that, 23 you know, and be anywhere accurate, because it's not a 24 linear model. 25 BOARD MEMBER BITZER: Right. Yeah, I know the	720 1 I don't -- 2 VICE-CHAIR TRUJILLO-DAVIS: Okay. And -- 3 MR. DUNHAM: -- that was from NMOGA. You'd have 4 to ask them for that. 5 VICE-CHAIR TRUJILLO-DAVIS: Okay. And I don't 6 know if this is an appropriate time, Madam Hearing 7 Officer, you can direct me if I'm wrong. But I'd like to 8 ask questions about Exhibit 38, which is the NMED economic 9 analysis and just where that data source came from. Was 10 it from a survey as well? 11 HEARING OFFICER ORTH: So, first, you have to 12 establish that that is information that Mr. Dunham would 13 have, and then you can ask the question. 14 So, Mr. Dunham, do you know whether there was a survey 15 involved there? 16 MR. DUNHAM: No, ma'am, I do not. 17 HEARING OFFICER ORTH: Okay. I'm sorry 18 Vice-Chair, then it's not appropriate to question him 19 further about that point. 20 VICE-CHAIR TRUJILLO-DAVIS: All right. That's 21 okay. Are we going to speak to anybody later in the 22 hearing? I checked the Excel spreadsheet, but I didn't 23 see where it was mentioned that we would be talking about 24 Exhibit 38. 25 HEARING OFFICER ORTH: So I trust that Ms. Katz,

721 1 who has three witnesses on economic analysis, will be 2 addressing it, but let's double-check. Ms. Katz? 3 MS. KATZ: Thank you, Madam Hearing Officer. So 4 we do have three witnesses to put on in rebuttal for 5 Mr. Dunham's testimony. And I know you were mentioning 6 NMED Exhibit 38 and that's the Pennsylvania General Permit 7 5A. Is that what you're asking about? 8 VICE-CHAIR TRUJILLO-DAVIS: Maybe I may have the 9 wrong exhibit number. I was looking at the NMED's cost 10 analysis, but we can come back to that when we do your 11 update, and you have your rebuttal witnesses. That's 12 okay. I just wanted to understand where the data was 13 coming from, so... 14 MS. KATZ: Yes, and they will -- those -- and our 15 data is provided in each section of the rule. So that 16 might be -- but, yes, you can ask our witnesses when we 17 get to them. 18 VICE-CHAIR TRUJILLO-DAVIS: Okay. Thank you. 19 So back to Mr. Dunham, your data came from a 20 survey from NMOGA members. And the loss to -- that you 21 estimated, was that total loss to the company or just loss 22 to the company in New Mexico? 23 MR. DUNHAM: The job losses or the costs? 24 VICE-CHAIR TRUJILLO-DAVIS: Actually, both would 25 be really insightful.	723 1 the lines of the question that I think Member 2 Trujillo-Davis already asked is, you said that ten 3 companies were surveyed and you don't know what the 4 questions were that they were asked; is that correct? 5 MR. DUNHAM: No, I do not know. 6 BOARD MEMBER GARCIA: So you're just looking at 7 their answers for your analysis? I'm confused about that. 8 If you don't know what they were asked, what -- what 9 information do you have for your analysis? 10 MR. DUNHAM: I have per well costs for various 11 components of the rule, the various equipment and 12 operation components from ten different companies. 13 BOARD MEMBER GARCIA: Okay. Do you know if the 14 companies that were surveyed, were they a sprinkling of 15 small companies and large companies? Do you know anything 16 about the size of these companies that were surveyed? 17 MR. DUNHAM: You would have to ask the NMOGA 18 about the survey. Again, I was given the results to work 19 with. 20 BOARD MEMBER GARCIA: Okay. Thank you. Then, I 21 thought it was interesting when I think it was Mr. De 22 Saillan asked about a cost/benefit analysis. That -- that 23 definitely would be very interesting to see. Could I ask 24 you, sir, if -- if you had done a cost/benefit analysis, 25 what kinds of benefits would be considered if you were to
722 1 MR. DUNHAM: Actually, both are New Mexico, yeah. 2 VICE-CHAIR TRUJILLO-DAVIS: They're just for New 3 Mexico? 4 MR. DUNHAM: It's all just for New Mexico. 5 They're specific to New Mexico loss. 6 VICE-CHAIR TRUJILLO-DAVIS: Okay. Great. That's 7 all I wanted to clarify. Thank you very much. 8 HEARING OFFICER ORTH: Thank you, Vice-Chair. 9 Member Duval? I believe you have been with us, but having 10 trouble with your video. Happy to have you question 11 Mr. Dunham using only your sound. Can you hear me? 12 Member Duval? So I can see that you're unmuted on the 13 platform, but I'm not hearing you. 14 So Member Duval is messaging that he's on and he 15 can hear me. I'm sorry, Member Duval, we can't hear a 16 thing. Member Duval, you've been unmuted. I can see that 17 there's a green microphone next to your name. But now 18 he's saying he has no questions, so thank you very much, 19 Member Duval. 20 Let's move to Member Garcia. 21 BOARD MEMBER GARCIA: Thank you, Madam Hearing 22 Officer. I do have a couple of questions. 23 Thank you, Mr. Dunham, for your testimony. The 24 benefit of being the last person is a lot of people 25 already asked some of the questions that I had. But along	724 1 do a cost/benefit analysis? And I'm not asking you for a 2 hypothetical about how it would come out. I'm just -- I'm 3 just curious about what kind of benefits might be 4 considered in a cost/benefit analysis for this type of 5 industry? 6 MR. DUNHAM: I can give you just sort of an 7 example of a cost/benefit analysis. I write the annual 8 cost/benefit analysis for the Port Authority in New York 9 and New Jersey, for example. And in that case we would 10 look at benefits of a -- of something like this, we would 11 look at benefits to noise, to wildlife, to various types 12 of pollution. Those -- those are probably the largest; I 13 mean you can -- you can stretch a cost/benefit analysis to 14 a lot of -- a lot of kinds of things, but it starts 15 getting to be more mucky as you get out. And -- but -- 16 but in this case, the geography matters as well. If you 17 have noise happening, where you're in the middle of the 18 desert and there's nobody there, it has a lot less value 19 than if you have noise in an urban area. All of those 20 things matter. Time; time is a thing that you look at a 21 lot, creating time. You know, those -- those kinds of 22 things. 23 BOARD MEMBER GARCIA: Okay. And I'm wondering if 24 you would consider would there be a benefit to the 25 industry for some of the equipment that they may have to

725 1 buy that would reduce leakage? Would that be considered a 2 benefit of any kind? I understand the equipment is 3 expensive, but would -- did you in this study or -- or 4 perhaps in a cost/benefit analysis, would you look at the 5 benefit to the company of the equipment that would -- that 6 would reduce leakage? 7 MR. DUNHAM: The equipment would show up on the 8 cost side of the ledger. A reduction in leakage would 9 show up on the benefit side of the ledger, either as a 10 pollution-type of effect or potentially as a benefit to 11 the company. Again, I would have to really scope out that 12 type of analysis with an engineer. 13 Like with an airport analysis, I'm -- I'm not a 14 pilot, you would -- you would talk to the runway 15 engineers, the engineers that are working on the runway, 16 the engineers that, you know, work with aircraft, you 17 know, that's where you get your information. I'm an 18 economist, I'm not an oil and gas driller, but those are 19 the kinds of things you would look at, yes. 20 BOARD MEMBER GARCIA: Okay. That's all my 21 questions. Thank you very much, sir. 22 MR. DUNHAM: Thank you, ma'am. 23 HEARING OFFICER ORTH: Thank you, Member Garcia. 24 Member Honker, do you have questions of 25 Mr. Dunham?	727 1 costs you to do that and you could have spent that money 2 elsewhere in the economy. So that's -- that's -- you have 3 to take that into account. 4 BOARD MEMBER HONKER: And, likewise, with 5 suppliers, you calculate -- you have numbers of jobs lost 6 to suppliers, but wouldn't some of these suppliers be, as 7 Member Garcia mentioned, supplying the types of valves and 8 seals and fittings that -- that would be necessary in 9 order to upgrade equipment? 10 MR. DUNHAM: Some of this -- some of those 11 companies would be the suppliers of that type of 12 equipment, I would think. 13 BOARD MEMBER HONKER: So -- so I guess my 14 question is, so the direct jobs and the supplier jobs, 15 there would be some degree of positive impact from -- from 16 meeting these requirements that would reduce those numbers 17 to a net number that would be lower than what you have; is 18 that correct? 19 MR. DUNHAM: I think as -- as I said, if you're 20 doing a regulatory impact analysis, you would want to look 21 at all of those kinds of effects. This was an analysis of 22 the cost of the regulation on the industry. 23 BOARD MEMBER HONKER: Okay. A couple other 24 questions. I would assume if you're a producer and you're 25 capturing more hydrocarbon because you've put additional
726 1 BOARD MEMBER HONKER: I do. I have a few. So 2 good morning, Mr. Dunham. 3 MR. DUNHAM: Good morning. 4 BOARD MEMBER HONKER: And thanks for your 5 testimony. I'd like to return to the -- the kind of net 6 impact issue that Member Cates raised and Member Garcia 7 just mentioned. Earlier, you referred to the benefits 8 from the company spending all of this money for compliance 9 as benefits to the pollution control industry. But it 10 seems to me that these increased administrative costs, the 11 additional monitoring and observations that are required, 12 some of that work the companies may choose to do 13 themselves and -- and might well do. So, wouldn't you 14 think, rather than just grouping this as a pollution 15 control industry benefit, the company -- other employees 16 in the companies themselves would -- would get some 17 additional work or even jobs created in order to meet 18 those aspects of these requirements? 19 MR. DUNHAM: Yes, but, again, that's what we call 20 a "broken window fallacy." If it's a cost that's not -- 21 if it's a cost that's not aggregate to the economy, it's 22 not really an economic benefit. But if I -- if I go to 23 your home and I break all of the glass, right, then you 24 have to hire a glazier to put new glass in, then that 25 glazier gets work, but that's not a benefit because it	728 1 controls on, there would be some economic benefit of being 2 able to produce that hydrocarbon. Did you look at any 3 plus side from that in terms of your analysis? 4 MR. DUNHAM: Not my analysis, no, it didn't look 5 at that. 6 BOARD MEMBER HONKER: And then finally -- and I'm 7 probably really getting into the weeds here, but it seems 8 like some of these costs, you've lumped all of these costs 9 as -- as costs to the ozone precursor rule, but it seems 10 like some of these costs would -- would be incurred to 11 actually improve compliance with current rules that are on 12 the books, either by NMED or by the Energy and Minerals 13 Department. And would there -- well, I assume you 14 didn't -- you didn't do any differentiation of the new 15 rules versus improved compliance with old rules in your 16 analysis? 17 MR. DUNHAM: No, sir. Most -- most analyses are 18 done "ceteris omnibus," with all things being equal, 19 unless you -- you know, you're specifically bringing in 20 something like that. 21 BOARD MEMBER HONKER: Okay. All right. Thank 22 you very much. No other questions. 23 HEARING OFFICER ORTH: Thank you, Member Honker. 24 Madam Chair, I understand you have a few more 25 questions.

729 1 CHAIRPERSON SUINA: Thank you, Madam Hearing 2 Officer. 3 And thank you again, Mr. Dunham, for answering 4 all our questions. Like I said earlier, there is a lot of 5 information and data in models, and model assumptions that 6 you have presented to us. And with that said, I know that 7 we've talked a little bit -- and Legal Counsel Katz also 8 mentioned this. Is there a way of looking at your model 9 and having similar, if not the same inputs that would -- 10 that maybe NMED would assume, whether we're talking about 11 cost per barrel or the wage -- average wage assumptions 12 that are in your report? Is that -- is that possible? 13 MR. DUNHAM: Of course. All models are based on 14 assumptions and we can always change the assumptions that 15 are relied on. 16 CHAIRPERSON SUINA: Okay. Okay. And as Member 17 Trujillo-Davis said, I do have just a procedural; so as we 18 get the NMED model, would there be the opportunity to also 19 hear Mr. Dunham's input or responses? Or how -- how will 20 that -- that we could ask Mr. Dunham after the NMED's 21 presentation of their economic model? Is that possible? 22 MS. KATZ: Would you like me to answer that, 23 Madam Hearing Officer? 24 HEARING OFFICER ORTH: Oh, please, Ms. Katz. 25 MS. KATZ: Thank you. Madam Chair, so I	731 1 outlined in the -- in the text of the rule. 2 CHAIRPERSON SUINA: Okay. So was there -- I 3 guess, stemming from Member Honker's question, so there 4 was not an analysis done to account for the administrative 5 requirements in order to be compliant with the current 6 administrative -- the current laws on the books; is that 7 correct? 8 MR. DUNHAM: No, ma'am, I didn't calculate the 9 entire New Mexico rules that were already on the books. I 10 just looked to see where the -- where the rule stated that 11 a new report or a new database or a new -- some kind of a 12 administrative function would need to be performed. 13 CHAIRPERSON SUINA: Okay. Thank you for that, 14 Mr. Dunham. I appreciate your time again and being on the 15 hotseat for so many hours. Thank you so much. 16 MR. DUNHAM: Thank you so much, ma'am. 17 HEARING OFFICER ORTH: Thank you, Madam Chair. 18 Unless there are other questions from Board members, I 19 will return to Mr. Hiser and ask if there will be any 20 follow-up or redirect. 21 MR. HISER: Just a couple of questions, Madam 22 Hearing Officer. 23 REDIRECT EXAMINATION OF JOHN R. DUNHAM 24 BY MR. HISER: 25 Q. Mr. Dunham, in your line of business doing
730 1 apologize for the confusion. The model that I was talking 2 about was the model -- the photochemical modeling that 3 Mr. Morris did. And my -- I was just simply trying to 4 make the point that for the modeling that we used, you 5 know, for that, we provided all of the data and 6 assumptions. We did not do our own economic modeling. We 7 provided, you know, cost estimates and emissions 8 reductions estimates, and that's detailed extensively 9 throughout the testimony and on the spreadsheets that are 10 listed as exhibits. 11 So you'll be able to talk to our witnesses that 12 are testifying to all of the provisions of the rules about 13 those cost estimates, so that -- we do not have a model -- 14 an economic model. 15 CHAIRPERSON SUINA: Okay. Thank you for that 16 clarification, Ms. Katz. I appreciate that. 17 With that said, I just have a couple other 18 questions here of Mr. Dunham. So in your report, you have 19 mentioned that there was a minimum of 35 new 20 administrative requirements that would need to be adhered 21 to. And I think this goes to Member Honker's question. 22 So would these be in addition -- administrative 23 requirements in addition to the requirements that are 24 already on -- on the books? 25 MR. DUNHAM: These were changes that were	732 1 economic analysis, is it normal to use anonymized cost 2 data? 3 A. Oh, yes, often. 4 Q. And is the reason for that because individual 5 company cost data is very proprietary, and would reveal 6 potentially, competitively disadvantageous information if 7 it was disclosed about the specific company? 8 A. Yes, sir, it's extremely difficult to get 9 individual company data. 10 Q. And so it's often that you'll have an association 11 or whatever, send data to a third party, to combine that 12 data and then provide it in an anonymous format to you for 13 analysis? 14 A. Yes, sir, we do that all the time for 15 associations. 16 Q. Okay. Is one of the differences to Ms. Katz's 17 point between, say, her emissions model that Mr. Morris 18 presented -- which I know you didn't hear, but the model 19 that you did, is there a difference in the legal 20 protections available to emissions data and proprietary 21 company financial data? 22 A. I'm sorry, sir. I'm not a lawyer, I have no idea 23 what the legal representations are. 24 Q. That's fair. 25 A. When I do work, I sign non -- you know,

733 1 confidentiality agreements, so -- 2 Q. That's fair. 3 A. -- I can't get the data available without 4 permission. 5 Q. Okay. Thank you very much. 6 With respect to Chair Suina's questions -- and I 7 must say, it must be gratifying to you to have a Board 8 member have reviewed your report in such detail. Now, 9 then, just to be clear, the base model assumptions you're 10 using date from 2018, correct? 11 A. The base -- the base model structure comes from 12 2018. The job numbers come from 2018. The other 13 assumptions that I outlined in the PowerPoint today are 14 all from the time I did that report. 15 Q. Right. And so things like the wage system and 16 the price of oil and gas was from the dates in 2021 that 17 you referenced, both in your report and in your testimony 18 in response to Member Cates, correct? 19 A. Correct, sir. 20 Q. Okay. And will you lay out some more updated 21 information about your model with the correction on the 22 gas well count that you believe may be more appropriate in 23 your surrebuttal testimony? 24 A. Yes, sir, I did -- I did some -- some. 25 Q. And so we'll be hearing that in a little bit?	735 1 HEARING OFFICER ORTH: Yes. 2 VICE-CHAIR TRUJILLO-DAVIS: And it says "switch 3 audio." And if you click on that it gives you a phone 4 number to call, where you click switch. 5 HEARING OFFICER ORTH: That's excellent 6 information. Thank you, Vice-Chair. And I hope that 7 that's helpful to Member Duval. Thank you. 8 All right. We are back after a break, and I had 9 a request from one of the counsel to discuss the schedule 10 for this afternoon. Ms. Katz, I believe we turn now to 11 your three witnesses? 12 MS. KATZ: Yes, Madam Hearing Officer. 13 HEARING OFFICER ORTH: Okay. And after that? 14 I'm sorry, let me pull the spreadsheet back into my hands. 15 And then EDF has Witness Lackner. 16 MS. PARANHOS: Yes. Thank you, Madam Hearing 17 Officer, we have Witness Lackner on the economic analysis. 18 We also have a Dr. Tammy Thompson, who was unable to 19 testify yesterday, on the ozone modeling. 20 HEARING OFFICER ORTH: Yes. So I guess I'm 21 unclear then on your question. 22 MS. PARANHOS: I'm just -- I guess I'm trying to 23 understand when we would fit Dr. Tammy Thompson in, if it 24 would be today after the -- after the economic discussion 25 and before we get to definitions.
734 1 A. Yes, sir. 2 Q. Okay. Thank you. I guess that's all the 3 questions that I have. Thank you, Mr. Dunham. 4 A. Thank you, sir. 5 HEARING OFFICER ORTH: All right. Thank you, 6 Mr. Dunham. Thank you, Mr. Hiser. We do need to take a 7 break at this point. Let's come back -- 8 MR. DUNHAM: Yes, ma'am. 9 HEARING OFFICER ORTH: Let's come back at 11:15. 10 Thank you. 11 (Recess taken from 10:57 to 11:15 a.m.) 12 VICE-CHAIR TRUJILLO-DAVIS: Excuse me, Madam 13 Hearing Officer? 14 HEARING OFFICER ORTH: Yes. 15 VICE-CHAIR TRUJILLO-DAVIS: Can you hear me? 16 HEARING OFFICER ORTH: Yes, I can. 17 VICE-CHAIR TRUJILLO-DAVIS: Okay. Great. I just 18 wanted to let you know that I used the "other audio" 19 option when I had trouble calling in, so if anybody else 20 has issues, that helped out and it just allowed me to call 21 from a phone and have better sound. 22 HEARING OFFICER ORTH: So "other audio?" 23 VICE-CHAIR TRUJILLO-DAVIS: Yeah, if you look 24 down here by the "leave event," there's another button 25 there that has three little dots. It says "more options."	736 1 MS. KATZ: Madam Hearing Officer, may I ask, 2 again I'm concerned that Ms. Day is going -- we're 3 going -- we could run very close or after 3 p.m., and she 4 really needs to not testify after 3 p.m. So if we could 5 maybe get through the small business facilities, and then 6 have Ms. Thompson do her modeling rebuttal, that would be 7 best, if we could do that. 8 MS. PARANHOS: That's absolutely fine, that was 9 the clarification I was looking for. Thank you. 10 HEARING OFFICER ORTH: All right. Thank you very 11 much, Ms. Paranhos and Ms. Katz. Is there anything else 12 we need to talk about, Board members, before we go to the 13 Department's economic rebuttal? No? 14 And Ms. Day, I see you on the screen. Thank you 15 for joining us. Let's try your sound, please. 16 MS. DAY: Hello. 17 MS. KATZ: Madam Hearing Officer, can I also make 18 clear, though, that it's actually Mr. Powell who will be 19 going first on this topic. 20 HEARING OFFICER ORTH: That's fine. I just 21 wanted to -- since we hadn't seen Ms. Day before and I 22 didn't see Mr. Powell on the screen, I was just checking 23 her sound. 24 MS. KATZ: Yes, thank you. 25 MR. ROSE: Before you get there, Madam Hearing

737 1 Officer, if I might? Did we complete Mr. Hiser's 2 examination of Mr. Dunham? I thought his testimony was 3 limited to his direct and rebuttal, but not surrebuttal. 4 So I didn't know if his surrebuttal, if there is going to 5 be any, whether -- when that's going to happen in sort of 6 the schedule we just discussed. 7 HEARING OFFICER ORTH: All right. I might have 8 clarified that. My assumption was that the surrebuttal 9 would come after the Department's rebuttal, but if 10 Mr. Hiser feels differently, I'm happy to talk about it. 11 MR. HISER: Madam Hearing Officer, Mr. Hiser's 12 thoughts are exactly the same as yours. It would be after 13 the Department and Ms. Lackner's response. 14 HEARING OFFICER ORTH: Thank you very much. 15 MR. ROSE: Thank you, Madam Hearing Officer. 16 HEARING OFFICER ORTH: All right. So thank you, 17 Mr. Rose. Mr. Powell, let's try your sound. 18 MR. POWELL: Good morning. Can you hear me okay? 19 HEARING OFFICER ORTH: Oh, that's terrific. 20 Thank you. We've just had a lot of sound gremlins the 21 last two days. So thank you for that. 22 And Ms. Day, while you're on screen, just let's 23 try your sound. 24 MS. DAY: Can you hear me now? 25 HEARING OFFICER ORTH: Oh, yes, and it's very	739 1 for OCD, Mr. Powell? 2 A. Over 15 years. 3 Q. And what is your current job title? 4 A. My current title is the Engineering Bureau Chief. 5 Q. And what are your job duties? 6 A. I am responsible for the oversight and management 7 of the Engineering Bureau, which includes the 8 Administrative, Permitting and Underground Injection 9 Control, and then also oversee the inspection program. 10 Q. Great. Can you please summarize your relevant 11 professional qualifications for the Board? 12 A. For this, the relevant qualifications is my time 13 with the OCD. I participated in multiple environmental 14 and engineering-related rulemakings before the New Mexico 15 Oil Conservation Commission, which commonly is referred to 16 as the NM OCC, including the recent proceedings on the OCD 17 waste rule. I also regularly use the databases maintained 18 by the OCD, that contains the statistics on oil and gas 19 and natural gas wells. 20 Q. And a copy of your resume has been provided as 21 NMED Rebuttal Exhibit 18? 22 A. That is correct. 23 Q. And have you submitted prefiled rebuttal 24 testimony in this proceeding? 25 A. Yes, I have.
738 1 clear. Thank you so much. All right. Let's begin with 2 Mr. Powell. Mr. Powell, I think we have the standard 3 spelling on your first and last name. Would you raise 4 your right hand. Do you swear or affirm to tell the 5 truth? 6 MR. POWELL: I do. 7 HEARING OFFICER ORTH: Thank you very much. Go 8 ahead, Ms. Katz. Oh, and remember to mention the 9 exhibits. 10 MS. KATZ: Yes. Thank you, Madam Hearing 11 Officer. For the Board, Mr. Powell's exhibit -- his 12 testimony appears at NMED Rebuttal Exhibit 17. Okay. 13 BRANDON POWELL, 14 having been first duly sworn, was examined and 15 testified as follows: 16 DIRECT EXAMINATION OF BRANDON POWELL 17 BY MS. KATZ: 18 Q. Mr. Powell, will you please state your full name 19 for the record? 20 A. Brandon Powell. 21 Q. And Mr. Powell, where are you employed? 22 A. The Oil Conservation Division of New Mexico 23 Energy, Minerals and Natural Resources Department. 24 Q. And we'll be referring to the -- that Oil 25 Conservation Division as "OCD." How long have you worked	740 1 Q. And your full, written rebuttal testimony appears 2 as NMED Rebuttal Exhibit 17, correct? 3 A. That is correct. 4 Q. Do you have any changes to your written 5 testimony? 6 A. I do not. 7 Q. And do you adopt your written testimony here 8 today? 9 A. Yes. 10 Q. And you reviewed Mr. Dunham's economic analysis 11 that we just heard about from Mr. Dunham, correct? 12 A. That is correct. 13 Q. And your testimony responds to some of the 14 numbers and data presented by Mr. Dunham in his analysis? 15 A. Yes, I do. 16 Q. As the basis for his analysis, Mr. Dunham 17 determined that 81,975 wells would be affected by the 18 Department's proposed rule. Can you summarize for the 19 Board your review and conclusions regarding that number? 20 A. I certainly can. So I'll go through the numbers 21 that we pulled from our system -- or I pulled from our 22 system. In the written testimony, there's two numbers 23 that I provide. I provide a permitted total and then I 24 provide an active total; that's important. 25 The permitting total is total of all permitted

741 1 wells that may or may not be drilled yet. The active 2 total, which I'm going to focus on more in my discussion 3 today, is how many wells are actually drilled, completed, 4 and producing and listed as active wells. That's not to 5 say new wells can't come on, but at the time I pulled it, 6 that's how many wells were in active status. 7 So, for oil wells when I pulled the numbers, we 8 had 26,808 active oil wells. In Mr. Dunham's exhibit, he 9 had 33,293, so that's a difference of roughly just under 10 6,500 wells. 11 For gas wells, we have 26,530 active wells; 12 Mr. Dunham, in his testimony, had 50,954 wells. That's a 13 difference of 24,424. So in total, we have 53,338 active 14 wells for oil and gas; where Mr. Dunham, in his exhibit, 15 had 84,247. That's a difference of just a hair -- a 16 little over 30,000 wells. 17 So based on that 30,000 wells, our well count is 18 approximately a 37 percent reduction from what Mr. Dunham 19 used in his exhibit. 20 Q. Thank you, Mr. Powell. 21 Can you discuss your testimony regarding the 22 production values that were assigned by Mr. Dunham for low 23 production wells in his analysis? 24 A. Certainly. So his production values for his low 25 production wells, I believe in his exhibit, had the	743 1 Based on my experiencing, that's not common 2 operating practice, as not all wells are configured the 3 same. An example of this is for most natural gas wells in 4 New Mexico, it's not common to have an individual flare 5 stack on each natural gas well. As natural gas is the 6 targeted commodity and most are shut in if there's an 7 issue, not flared. 8 Back-calculating appears the study assigned flare 9 stacks to roughly 49,000 natural gas wells. As described 10 previously, we only have 26,000 active natural gas wells, 11 which that's a direct reduction of almost 46 percent of 12 the wells total based on count alone, and then not even 13 looking at the actual equipment itself. Because natural 14 gas wells don't have a lot of standalone flares, that 15 would reduce those costs substantially just on the flare 16 step. 17 Continuing the assumptions for oil wells, there 18 are numerous oil wells that don't have individual flares, 19 or wells that do flare, there's a portion of those wells 20 that are pumped to a central facility or tank battery, or 21 there may be one flare associated with multiple wells. 22 That could be, for example, 10 wells get pumped to a tank 23 battery, where all the fluids are handled, and that's 24 where that flare stack would be located. 25 Again, to kind of reiterate, not all locations
742 1 quantity as being 1 to 15 barrels of oil equivalent per 2 day. This aligns to what we typically use in New Mexico 3 as a stripper well. Our stripper wells are defined as 4 that's anything less than 10 barrels a day of oil or 60 5 MCF a day of natural gas. 6 We have roughly 14,858 gas stripper wells in the 7 state and 15,163 oil stripper wells in the state. That's 8 a total of just over 30,000 stripper wells in the state. 9 This number is significantly lower than Mr. Dunham's in 10 his exhibit. He had -- between oil and gas combined, he 11 had 59,000 low production wells or just over 59,000 low 12 production wells, which is -- the 59,000 low production 13 wells is actually roughly 6,000 wells over what we have as 14 total wells in the entire state for oil and gas. 15 Q. Thank you for that, Mr. Powell. 16 Can you summarize your evaluation of Mr. Dunham's 17 analysis with respect to the assumptions he made about the 18 prevalence of certain types of equipment at all wells? 19 A. Certainly. So those assumptions specifically 20 were in Mr. Dunham's Table 7. Looking at his equipment in 21 those assumptions and then back-calculating to get to the 22 number of wells used, it appears for that table he is 23 assigning equipment costs on multiple lines, far more 24 multiple lines for every well in that category, or at 25 least most wells in that category.	744 1 are created the same, in the same scenario. This applies 2 to also enclosed combustion devices, VRUs -- that's vapor 3 recovery units, in the exhibit; compressors, because 4 they're not all required at all locations based on 5 pressures, flow rates, all of that. 6 So, in summary, based on the base numbers to 7 create that Table 7, which are the basis for the monetary 8 numbers, the table doesn't appear to reflect true well 9 applications in New Mexico. And because of that, it would 10 likely significantly change the cost per well that is 11 summarized at the bottom of that table, because only a 12 portion of the wells would have a portion of those pieces 13 of equipment. 14 MS. KATZ: Thank you, Mr. Powell. I have no more 15 questions for Mr. Powell. 16 HEARING OFFICER ORTH: All right. Thank you, 17 Ms. Katz. 18 Ms. Fox, do you have questions of Mr. Powell? 19 MS. FOX: No, I don't, Madam Hearing Officer. 20 Mr. Powell, thank you for your testimony. 21 HEARING OFFICER ORTH: Okay. Thank you. 22 Ms. Paranhos? 23 MS. PARANHOS: No questions. Thank you, 24 Mr. Powell, for your testimony. 25 HEARING OFFICER ORTH: Thank you. Mr. Jaynes?

745 1 MR. JAYNES: No questions, Madam Hearing Officer. 2 HEARING OFFICER ORTH: Thank you. Ms. Devore? 3 Mr. Nykiel? 4 MR. NYKIEL: No questions. Thank you. 5 HEARING OFFICER ORTH: Thank you. Mr. de 6 Saillan? 7 MR. DE SAILLAN: No questions. Thank you. I 8 also wanted to thank the witness for his testimony. 9 MR. POWELL: Thank you. 10 HEARING OFFICER ORTH: Thank you. Mr. Hiser? 11 MR. HISER: Madam Hearing Officer, I do have a 12 couple of questions. Thank you. 13 CROSS-EXAMINATION OF BRANDON POWELL 14 BY MR. HISER: 15 Q. So, Mr. Powell, if I turn your attention to -- 16 have you seen Table 7 in Mr. Dunham's report? Was that 17 what you were just discussing? 18 A. Yes, I have. 19 Q. If you look at the cost there, for example, for 20 example in Table 7 in Mr. Dunham's report, you see an 21 entry for compressors. And can you -- what's the cost 22 given per oil well for that? 23 A. It shows \$55. 24 Q. Is \$55 reflective of the cost of actually 25 purchasing and installing a compressor at a site?	747 1 HEARING OFFICER ORTH: Mr. Colclasure? 2 MR. COLCLASURE: No questions. Thank you. 3 HEARING OFFICER ORTH: And Ms. Witherspoon? 4 MS. WITHERSPOON: No questions. Thank you. 5 HEARING OFFICER ORTH: Thank you. I'm going to 6 turn to the Board for their questions. While I'm doing 7 that, if you are an attendee rather than a panelist on 8 this platform and you have a question of the witness, 9 please reach out in the Chat. The Chat is enabled for 10 everyone. 11 Madam Chair, do you have question of Mr. Powell? 12 CHAIRPERSON SUINA: Yes. Thank you, Madam 13 Hearing Officer. 14 EXAMINATION OF BRANDON POWELL BY THE BOARD 15 CHAIRPERSON SUINA: Can you hear me okay? Okay. 16 Yes, Mr. Powell, I just had one, maybe two questions. So 17 the information you presented this morning in your 18 testimony, is that data readily available, say, on the -- 19 on the NMED's website or on OCD's website? 20 MR. POWELL: Yes, Madam Hearing Officer, all of 21 that data is readily available on the New Mexico Oil 22 Conservation Division's website using the search functions 23 in the website itself. And it's publicly available to 24 all. 25 CHAIRPERSON SUINA: Okay. All right. Actually,
746 1 A. I have no idea. I don't know the cost of 2 installing equipment. 3 Q. But does that seem sort of low for a piece of 4 equipment the size of a compressor? 5 A. I have no idea because there's operated owned -- 6 operator-owned compressors and then there's leased-owned 7 compressors. If an operator owns it, that might be low; I 8 don't know. If it's a lease, that might be -- I don't 9 know the cost of installation. 10 Q. So you don't know from looking at this table 11 whether the costs are apportioned to the well for whatever 12 services may have been provided to that well site, versus 13 saying that each of these things are present at a well? 14 A. I don't see where the table makes that assumption 15 of how the cost is broken down. 16 Q. Perfect. Thank you. No further questions. 17 HEARING OFFICER ORTH: Thank you, Mr. Hiser. 18 Mr. Rose, do you have questions of Mr. Powell? 19 MR. ROSE: No questions, Madam Hearing Officer. 20 HEARING OFFICER ORTH: Thank you. Mr. Janoe? 21 MR. JANOE: No questions. 22 HEARING OFFICER ORTH: Mr. Butzier? 23 MR. BUTZIER: No questions. Thank you. 24 HEARING OFFICER ORTH: Ms. Gutierrez? 25 MS. GUTIERREZ: No questions. Thank you.	748 1 that's the only question I have. Thank you. 2 HEARING OFFICER ORTH: Thank you. Vice-Chair 3 Trujillo-Davis? 4 I can't hear you. 5 VICE-CHAIR TRUJILLO-DAVIS: I'm sorry, I couldn't 6 find my mute button. I do not have any questions. Thank 7 you, Mr. Powell. 8 MR. POWELL: Thank you. 9 HEARING OFFICER ORTH: Thank you. Member Cates? 10 BOARD MEMBER CATES: No questions here. Thank 11 you. 12 HEARING OFFICER ORTH: Thank you. Member Bitzer? 13 BOARD MEMBER BITZER: No questions. Thank you. 14 HEARING OFFICER ORTH: Thank you. Member Duval? 15 He can hear us and he is saying in the Chat, "No 16 questions." Member Garcia? 17 BOARD MEMBER GARCIA: Yes. Thank you, Madam 18 Hearing Officer. I have one question for Mr. Powell. 19 Thank you for your testimony. And I just find it curious 20 that there would be such a discrepancy with the number of 21 actual active wells. I do know that that information is 22 readily available on the website -- the OCD website. And 23 I would think OCD would be the entity with the expertise 24 and the number of active wells, et cetera. 25 Can you -- or is there any other source of

749 1 information that -- where somebody wants to know how many 2 active wells are in New Mexico, is there any other source 3 out there where somehow this information is not accurate 4 to some people? I just don't understand that. 5 MR. POWELL: I am not aware of other sources. I 6 don't know where the numbers were pulled up from for the 7 analysis. The only other scenario I can potentially think 8 of is they pulled active formations or completions in New 9 Mexico. That might build up to that many, but one well 10 could be completed in multiple formations or have multiple 11 completions per well. And my only thought is maybe they 12 pulled active completions in the state. 13 BOARD MEMBER GARCIA: Okay. And the numbers 14 you're giving are the -- are the 2018 numbers that they 15 relied on for their analysis; is that right? Wasn't it 16 2018? 17 MR. POWELL: The numbers that I talked about that 18 they gave, that was in their exhibit. The numbers I 19 pulled, I believe I pulled last month in prep for my 20 rebuttal testimony. 21 BOARD MEMBER GARCIA: Okay. So we're talking 22 about two different time periods for the number of active 23 wells then? 24 MR. POWELL: If -- if they didn't pull the 25 number -- well count until 2018, it might be two different	751 1 Q. Were you able to recreate his numbers? 2 A. I didn't try to recreate his numbers. I tried to 3 run my own numbers to get the accurate numbers. 4 Q. Okay. Did you -- did you try to see where his 5 numbers may have -- where he might have been getting his 6 numbers? 7 A. I did not. 8 MS. KATZ: Okay. Thank you. That's all I have. 9 HEARING OFFICER ORTH: All right. Thank you, 10 Ms. Katz. If there's nothing further, we'll excuse 11 Mr. Powell for the moment. Thank you very much, 12 Mr. Powell. 13 MR. POWELL: Thank you, Madam Hearing Officer. 14 HEARING OFFICER ORTH: Are we turning now to 15 Ms. Day? 16 MS. KATZ: Yes, Madam Hearing Officer. The 17 Department calls Susan Day and Brian Palmer. 18 HEARING OFFICER ORTH: All right. Thank you. 19 Susan Day is the standard spelling. Ms. Day, if you would 20 please raise your right hand. Do you swear or affirm to 21 tell the truth? 22 MS. DAY: Yes, I do. 23 HEARING OFFICER ORTH: Thank you. And let's see. 24 Mr. Palmer, also standard spelling on first and last name. 25 I see your right hand is raised. Do you swear or affirm
750 1 numbers, but it still wouldn't affect it that greatly. 2 Our well count has actually gone up since 2018, not down. 3 HEARING OFFICER ORTH: Is that it, Member Garcia? 4 BOARD MEMBER GARCIA: (Nodding head.) 5 HEARING OFFICER ORTH: All right. Member Honker? 6 BOARD MEMBER HONKER: Thanks for your testimony, 7 Mr. Powell. I have no questions. 8 HEARING OFFICER ORTH: All right. Thank you. 9 Ms. Katz, did any of that questioning raise a 10 need for redirect for you? 11 MS. KATZ: Just a few questions, Madam Hearing 12 Officer. 13 REDIRECT EXAMINATION OF BRANDON POWELL 14 BY MS. KATZ: 15 Q. Mr. Powell, did Mr. Dunham in his analysis state 16 that he got his information regarding the number of wells 17 from the OCD website? 18 A. In his statement this morning he said that part 19 of that was from the OCD website. 20 Q. Okay. And I believe in his -- in his testimony 21 or his -- his actual report, he states that the data was 22 taken from -- from the OCD's website. 23 Did he say what searches he used to come up with 24 that number on the OCD website? 25 A. I don't believe so, no.	752 1 to tell the truth? 2 MR. PALMER: I do. 3 HEARING OFFICER: Thank you very much. Ms. Katz? 4 SUSAN DAY and BRIAN PALMER, 5 having been first duly sworn or affirmed, were 6 examined and testified as follows: 7 MS. KATZ: Okay. 8 HEARING OFFICER ORTH: Which of the exhibit? 9 MS. KATZ: Yes. Thank you for keeping up, 10 reminding me. That's very helpful, actually. This 11 testimony is provided in NMED Rebuttal Exhibit 19. 12 DIRECT EXAMINATION OF SUSAN DAY 13 BY MS. KATZ: 14 Q. Ms. Day, I'll start with you. Will you please 15 state your full name for the record? 16 A. Susan Day. 17 Q. And where are you employed, Ms. Day? 18 A. I'm employed at the Eastern Research Group. 19 Q. And we'll be referring to Eastern Research Group 20 as "ERG" here. How long have you worked for ERG? 21 A. I've worked for ERG approximately four years, 22 with an additional 29 years in the environmental 23 consulting industry. 24 Q. And what is your current job title? 25 A. Senior economist.

753 1 Q. And can you describe your educational and 2 professional qualifications? 3 A. Yes. I hold a B.A. in Economics from Colby 4 College, and an MS in Resource Economics from the 5 University of Rhode Island. And I am an economist and 6 project manager with 34 years of experience conducting and 7 managing economic regulatory and data analyses that 8 support environmental regulations under federal 9 environmental statutes. 10 Q. And a copy of your resume has been provided as 11 NMED Exhibit 103, correct? 12 A. Yes, correct. 13 Q. Have you submitted prefiled rebuttal testimony 14 regarding the economic analysis submitted by NMOGA in its 15 direct testimony in this proceeding? 16 A. Yes, I have. 17 Q. And your full, written rebuttal testimony is 18 marked as NMED Rebuttal Exhibit 19? 19 A. Yes, it is. 20 Q. Do you have any changes to your rebuttal 21 testimony? 22 A. No, I do not. 23 Q. And do you adopt that testimony here today? 24 A. Yes, I do. 25 DIRECT EXAMINATION OF BRIAN PALMER	755 1 regulations, including the background research, 2 identification of control technologies, estimating of cost 3 and environmental impacts and preparing all of the 4 documentation needed to support proposed and final 5 regulations. 6 Q. Thank you. And a copy of your resume has been 7 provided as NMED Exhibit 33, correct? 8 A. Yes. 9 Q. And have you submitted prefiled rebuttal 10 testimony regarding the NMOGA economic analysis in this 11 proceeding? 12 A. Yes. 13 Q. And your full, written rebuttal testimony is 14 marked as NMED Rebuttal Exhibit 19? 15 A. Yes. 16 Q. Do you have any changes to your testimony? 17 A. No. 18 Q. And do you adopt that testimony here today? 19 A. Yes. 20 MS. KATZ: Okay. So I believe we're presenting a 21 PowerPoint. So is that Mr. Palmer who's going to be 22 presenting that? 23 MR. PALMER: Oh, I'm sorry. I thought Ms. Kuehn 24 was going to be driving that. 25 HEARING OFFICER ORTH: Ms. Kuehn.
754 1 BY MS. KATZ: 2 Q. Okay. Turning to Mr. Palmer. Mr. Palmer, will 3 you please state your full name for the record? 4 A. It's Brian Palmer. 5 Q. And where are you employed? 6 A. I am also employed with Eastern Research Group. 7 Just a little background; Eastern Research Group is a 8 privately-owned company with about 400 employees. We 9 focus primarily on government and state consulting. We 10 generally do not do any private industry work, so we try 11 to maintain a -- keep ourselves free of conflicts of 12 interest. 13 Q. Thank you for that. How long have you worked for 14 ERG, Mr. Palmer? 15 A. Just over 25 years. Prior to that I worked for 16 five years for Radiant International. 17 Q. And what is your current job title? 18 A. I am a senior environmental scientist. 19 Q. And can you describe your educational and 20 professional qualifications? 21 A. Yes. I have a Bachelor of Science degree in 22 Biology from Bates College and a Master of Arts from the 23 Ecology Curriculum at the University of North Carolina at 24 Chapel Hill. I have 30 years of experience supporting the 25 federal and state governments in developing air quality	756 1 MS. KATZ: Oh. Sorry. 2 MR. PALMER: Do you want Ms. Kuehn to drive that 3 or am I driving that? 4 MS. KATZ: Whoever we picked there, but they just 5 need to be given -- there we go. Oh. 6 MR. PALMER: There we are. Thank you. 7 MS. KATZ: I saw it for a minute and then it went 8 away. 9 MS. KUEHN: Okay. Let me try again. 10 BOARD MEMBER HONKER: Can you put it in 11 presenting mode? 12 MS. KUEHN: It's showing in presenting mode. 13 MS. KATZ: There it is. Okay. It takes a 14 minute. 15 All right. Ms. Day, can you summarize your 16 impressions of the microeconomic model that John Dunham -- 17 Mr. Dunham claims to have used to estimate the costs and 18 impacts of proposed Part 50? 19 MS. DAY: Yes. My impression of Mr. Dunham's 20 analysis is that NMOGA has not provided enough detail in 21 terms of underlying data, assumptions and Excel 22 spreadsheets or code to allow a real analysis of what he 23 did or his conclusions. 24 But I would say that it's clear that Mr. Dunham's 25 analysis significantly overstates the number of wells

757 1 affected by the proposed rule, as well as the costs of the 2 proposed rule. But without the ability to review the 3 model in detail, including how the universe of affected 4 entities and unit compliance costs were generated, I 5 believe that the Board should reject Mr. Dunham's 6 conclusions and not give any weight to the estimated costs 7 and impacts certified by Mr. Dunham in that analysis. 8 MS. KATZ: Thank you. Ms. Day, do you agree with 9 the estimates of direct administrative and operational 10 costs estimated by Mr. Dunham? 11 MS. DAY: No. Mr. Dunham estimates the direct 12 administrative and operational costs of the rule to be a 13 minimum of 3.8 billion dollars in 2020 dollars over a 14 five-year period. He also states that the bulk of these 15 costs will occur in the first year or two. 16 By comparison, the ERG estimate of the total 17 annual costs is 338 million per year, and over a five-year 18 period, that cost would be no more than 1.7 billion 19 dollars, or about one-half of what Mr. Dunham estimated. 20 And I'd also like to just point out that NMED has 21 been very transparent regarding the development of these 22 cost estimates. And the spreadsheets underlying the 23 estimates were posted for evaluation by stakeholders and 24 the public. And the direct testimony submitted by NMED 25 contains in-depth explanations of where the data came	759 1 affected wells? 2 MR. PALMER: Mr. Dunham estimates that there are 3 84,247 wells that will be affected by proposed Part 50, 4 which is nearly two times the number of wells that NMED 5 and ERG determined would be affected by the rule. While 6 he references the OCD well statistics from January 28th, 7 2021, on the OCD website, he provides no explanation of 8 the search he did on the OCD website. 9 Again, Mr. Powell has confirmed that the well 10 count Mr. Dunham used in his analysis is incorrect and 11 significantly overstated. 12 MS. KATZ: Thank you. Ms. Day, does it matter 13 that Mr. Dunham's and NMED's affected well estimates do 14 not agree? 15 MS. DAY: Yes, it does. The number of wells is a 16 foundational data point underpinning the entire economic 17 analysis. Overstating the number of affected wells leads 18 to an overestimation of compliance costs associated with 19 proposed Part 50. 20 MS. KATZ: So can you move to the next slide, 21 please? 22 MS. KUEHN: I apologize. It's -- for some reason 23 there's a significant delay. 24 MS. KATZ: That's fine. We'll wait. 25 Mr. Palmer, are the costs in the proposed rule
758 1 from, what the assumptions were, and how the proposed rule 2 requirements were developed based on those stated 3 assumptions. 4 MS. KATZ: Thank you. Next slide, please. 5 MS. KUEHN: I apologize, it appears to be frozen. 6 MS. KATZ: Okay. 7 MS. KUEHN: There we go. 8 MS. KATZ: Okay. Turning to Mr. Palmer. What 9 did you determine were the number of wells that would be 10 affected by the proposed rule, and how did you come up 11 with that number? 12 MR. PALMER: ERG estimated that there would be 13 about 48,000 producing wells in the seven counties that 14 would be affected by the proposed Part 50. We obtained 15 our data for this cost estimate from the Oil and 16 Conservation Division, OCD, of the New Mexico Energy, 17 Minerals and Natural Resources Department. 18 My rebuttal testimony that I submitted earlier, 19 detailed how we determined the number. As you just heard 20 from Brandon Powell, the Bureau Chief of OCD's engineering 21 bureau, his testimony exhibited as NMED Rebuttal Exhibit 22 17, confirmed that our estimate of the number of affected 23 wells is correct. 24 MS. KATZ: And Mr. Palmer, what is your 25 impression of Mr. Dunham's estimate of the number of the	760 1 incurred at the level of the well site or the wellhead? 2 MR. PALMER: The rule requirements and costs are 3 generally applied at the level of what I'll refer to as 4 the well site, not at the wellhead. The well site 5 includes more equipment, such as storage tanks, 6 separators, et cetera, than just the actual wellhead. 7 For efficiency, that equipment will be shared 8 among multiple wells associated with that site; therefore, 9 pollution control costs should be estimated generally at 10 the level of the well site and not at the wellhead. 11 MS. KATZ: And Mr. Palmer, does Mr. Dunham's 12 analysis correctly attribute costs to the well site or the 13 wellhead? 14 MR. PALMER: In his Table 7 of his analysis, 15 Mr. Dunham appears to apply his costs at the level of the 16 well, rather than at the well site. Because he is 17 applying the costs to the number of wells, rather than to 18 the number of estimated well sites, he may be 19 overestimating the costs by several times, depending on 20 how many wells were associated with the well site. 21 However, because Mr. Dunham provided no 22 supporting documentation of these costs, it is not 23 possible to accurately determine how this factor affects 24 the overall cost estimates. 25 MS. KATZ: Thank you. Mr. Palmer, how does

761 1 Mr. Dunham estimate the units and total compliance costs 2 associated with the proposed rule? 3 MR. PALMER: We don't have any documentation of 4 how he developed those costs. Mr. Dunham asserts that his 5 analysis relies on a survey of ten companies from NMOGA's 6 membership to develop estimates of equipment and 7 operational costs to comply with the proposed Part 50, but 8 Mr. Dunham provides neither a copy of the survey 9 instrument, the questionnaire, nor does he provide any 10 responses or raw data submitted by the companies that he 11 has -- that were purportedly surveyed. 12 Without this information, it is impossible to 13 assess the accuracy or variability of his results, how the 14 data were reduced to the values used in his analysis, 15 particularly in Table 7 of his report, or how they relate 16 to ERG's cost estimates that we detailed in our 17 spreadsheets that have been provided to the public since 18 early June. 19 Even if the data were declared confidential by 20 the respondents to the survey, there are methods to 21 aggregate the data from multiple respondents to conceal 22 confidential information. 23 MS. KATZ: Thank you. And can you describe how 24 other -- Mr. Palmer, how other regulatory programs with 25 which you have worked, have protected confidential and	763 1 questionnaires that those facilities are filling out, that 2 is totally public information and is available so 3 nobody -- so people know exactly what data are being 4 collected. 5 MS. KATZ: Thank you, Mr. Palmer. And this is 6 for your -- you're referring to the greenhouse gas 7 reporting program at the federal level so you're talking 8 about -- 9 MR. PALMER: Yes. 10 MS. KATZ: -- national -- nationwide data 11 collection? 12 MR. PALMER: Yes. 13 MS. KATZ: And Mr. Palmer, do you have any other 14 concerns regarding how the costs were applied in 15 Mr. Dunham's analysis? 16 MR. PALMER: Yes. Another issue is that 17 Mr. Dunham applies certain costs for certain types of 18 controls or emission sources to each individual well, even 19 though those types of emission sources are not located at 20 each well or well site. And I think this reflects the 21 testimony you just heard from Mr. Powell as well. 22 While it is true that Mr. Dunham presents these 23 as average costs per well, this approach likely leads to a 24 substantial overestimate of the total costs that will, in 25 turn, lead to an unreliable estimate of the economic
762 1 proprietary data? 2 MR. PALMER: Yes. As developing air quality 3 regulations over the past 30 years we've often had to deal 4 with proprietary information from industry surveys, et 5 cetera. One area I've been working with the last few 6 years is the greenhouse gas reporting program, and that 7 program is collecting very, very detailed production data 8 from numerous facilities; some of it is extremely 9 sensitive. 10 They are able to make quite a bit of that 11 information public on EPA's website, and they go through 12 various steps of aggregating the data in order to conceal 13 proprietary information or sensitive information for 14 particular industries. So, for example, aggregate the 15 data; if they only have a few reporters for a particular 16 data item, they will just report a total and they won't 17 report the number of reporters so that you couldn't figure 18 out what the average is. You know, case in point, if 19 there's only three reporters in a particularly specialized 20 industry, so they'll -- they won't report even an average 21 because, you know, one of those could figure out what the 22 other two are doing. 23 So there are -- there are a lot of ways to -- to 24 protect confidential information by aggregating sensitive 25 data. But more importantly, too, is that the	764 1 impacts of the proposed rule. 2 MS. KATZ: Thank you. Can we go to the next 3 slide? 4 MR. PALMER: We're on this slide. 5 MS. KATZ: Oh, sorry. Do we need to go back? 6 MR. PALMER: No, we're fine. 7 MS. KATZ: Okay. 8 MR. PALMER: We're fine, but I will just continue 9 my testimony here. 10 MS. KATZ: Sorry, I thought we were on another 11 question. Go ahead, Mr. Palmer. 12 MR. PALMER: Mr. Dunham's costs in Table 7 of his 13 report did not align with ERG's cost estimates that we 14 have made public. And -- and what I'd like to just talk 15 about are a few examples that we have. So we compared his 16 cost estimates to what we've been able to estimate and 17 then also looked at some cost estimates that were prepared 18 by the EPA -- the federal EPA for a nationwide rule for a 19 similar source category or emission source type. 20 And I'd just like to take the next three slides, 21 I believe, to just go over those examples. But what it 22 is -- okay, we'll go to that one next. So the first 23 example is with glycol dehydrators. And in Table 7 of 24 Mr. Dunham's report, he estimated a capital cost for 25 glycol dehydrators of 794 million dollars in New Mexico.

765 1 When we did our estimate for glycol dehydrators, 2 we came up with a capital cost estimate of about 4.6 3 million dollars for controls at existing glycol 4 dehydrators. And this is based on the New Mexico 5 Environment Department's equipment data that comes out of 6 their permitting -- permitting database. And so these are 7 all of the glycol dehydrators that are in their Permian 8 database. 9 We estimated what the cost of a control device 10 would be, and that is documented in our equipment 11 spreadsheets. Just for comparison, the federal EPA has 12 two rules for the oil and gas industry that focus on 13 glycol dehydrators. And one of them is a major source 14 rule and the other is an area source rule. And when the 15 federal EPA initially developed the major source rule, 16 they also in the proposal, included the area sources. 17 So major sources are those that are emitting 18 greater than 25 tons per year of a single half or 10 19 tons -- excuse me -- 10 tons per year of a single 20 hazardous air pollutant, or 25 tons per year of a total. 21 So they estimated that capital costs nationwide for all 22 glycol dehydrators in their rule, and based on that 23 information the nationwide rule cost estimate would be 670 24 million dollars. So that's actually less than JDA's cost 25 estimate for New Mexico alone.	767 1 recovery units of 481 million dollars. So the total 2 additional first year of cost for those three control 3 items is 1.5 billion dollars. 4 However, it is not clear from the table, where 5 you would use those controls because he already has 6 separate controls for the other items listed there: 7 compressors, gas well liquid, unloading, et cetera. So 8 it's not clear how those costs fit together, and it 9 appears that there's the potential for double-counting of 10 the costs for those VOC controls. 11 I'd like to go to the next slide. So just before 12 I let Susan talk about this slide, so my overall 13 professional opinion is that the costs presented in 14 Mr. Dunham's analysis are not sufficiently documented. 15 And there is no indication of how most of them are related 16 to this specific provisions of the proposed rule, or the 17 detailed and documented cost estimates provided by NMED to 18 the stakeholders. 19 In some cases, Mr. Dunham's cost estimates are 20 orders of magnitude higher than NMED's estimates, and as 21 well as comparable estimates in federal regulatory actions 22 for similar sources. Again, in my professional opinion, I 23 think the Board should give no weight to the economic 24 impact analysis because it contains no credible 25 documentation of the numbers that are the critical input
766 1 The next example is for storage tanks. The JDA. 2 capital cost estimate was 185 million dollars; ERG's 3 capital cost estimate was 69 million dollars. And this, I 4 just want to point out, this cost estimate is based on our 5 latest costs for the draft rule that was submitted on 6 September 6th, so this is slightly different. It's a 7 slightly lower cost because we raised the applicability 8 threshold. 9 So our number is about a third of the JDA 10 analysis, and without further information on the number of 11 sources or the types of controls, it's very hard for us to 12 evaluate the reason for this -- for the difference in 13 costs. 14 The final comment or slide I'd like to cover is 15 in Table 7 of Mr. Dunham's analysis, he has -- I believe 16 there's about ten rows of information. And there's 17 estimated VOC control costs for very specific pieces of 18 equipment: compressors, gas well liquid unloading, glycol 19 dehydrators, hydrocarbon liquid transfers, pipeline 20 pigging, launching and receiving, pneumatic controllers 21 and pumps, and finally storage tanks. So these are all 22 VOC emissions sources and they all have a particular type 23 of control applied. But he also includes costs for open 24 flares, of 252 million dollars, enclosed combusters and 25 thermal oxidizers of 794 million dollars, and vapor	768 1 to that analysis. 2 MS. KATZ: Thank you, Mr. Palmer. 3 Ms. Day, turning back to you, does Mr. Dunham's 4 analysis consider the reduced regulatory requirements 5 proposed for small business facilities as defined in the 6 proposed rule? 7 MS. DAY: No, it does not. And by failing to 8 take into account the lower compliance costs for 9 qualifying small businesses, Mr. Dunham overestimates the 10 economic impacts of the proposed rule. 11 MS. KATZ: And can we move to the next slide, 12 please? Are we on the wrong slide here? 13 MS. KUEHN: I think this is the correct slide. 14 MS. KATZ: Ms. Day, what is your response to 15 Mr. Dunham's estimated job losses due to the proposed 16 rule? I think we're behind here. 17 MS. DAY: Yeah, so we need to -- 18 MS. KATZ: Oh, sorry I'm -- I skipped some 19 things. 20 MS. KUEHN: Do you want to go back to this? 21 MS. KATZ: Yes. Sorry. 22 HEARING OFFICER ORTH: One at a time, please. 23 MS. KATZ: Ms. Day, I apologize. Let's go back 24 to the question that aligns with this slide. 25 Ms. Day, what is your response to Mr. Dunham's

769 1 net present value calculations of the costs associated 2 with Part 50? 3 MS. DAY: Mr. Dunham makes two assumptions in his 4 net present value calculation that I don't agree with. 5 First, he assumes a five-year time frame, but he didn't 6 provide justification for that time frame. 7 A more typical time frame routinely used in 8 federal air quality rulemaking would be between 10 and 20 9 years, and assumes to be 15 for purposes of analysis, 10 based on the useful life of the add-on control equipment 11 and equipment modifications required under Part 50. 12 And second, he assumes that nearly 85 percent of 13 the costs of the rule will be incurred by industry in the 14 first year. So given that investments in equipment are 15 typically spread out by affected owners, operators, a more 16 realistic assumption would be that the cost of the 17 regulation can be spread out more evenly over the 15-year 18 useful-life time frame. 19 Under this scenario, the present value of costs 20 would be significantly lower than Mr. Dunham has 21 estimated. 22 MS. KATZ: Thank you. And now here we go. 23 Ms. Day, what is your response to Mr. Dunham's 24 estimated job losses due to the proposed rule? 25 MS. DAY: Mr. Dunham doesn't provide enough	771 1 structure of this modeling for me to evaluate the accuracy 2 of his estimates of job losses in the oil and gas industry 3 or supporting industries. 4 Most importantly, if Mr. Dunham estimated 5 employment impacts using the compliance cost estimate as 6 the key input, and it's hard to know if that's what he did 7 because he doesn't say, to the extent that compliance 8 costs are overestimated, employment impacts would be 9 overstated as well. 10 MS. KATZ: Thank you, Ms. Day. 11 And can you discuss your impression of the 12 rebuttal testimony submitted by the other parties 13 regarding Mr. Dunham's economic analysis? 14 MS. DAY: Yes. The testimony of Maureen Lackner 15 from the Environmental Defense Fund, or EDF, supports 16 several of the points that I've made in my testimony, and 17 also highlights some limitations of Mr. Dunham's analysis. 18 First, Ms. Lackner's testimony supports our 19 observation that Mr. Dunham has overestimated the well 20 counts and that this leads to a significant overestimate 21 of total costs, even when his own unit cost estimates are 22 used. 23 Second, Ms. Lackner agrees that the time period 24 over which costs are incurred is misrepresented in 25 Mr. Dunham's analysis. Mr. Dunham assumes that the vast
770 1 detail regarding his analysis for me to be able to 2 evaluate the accuracy of his estimates of job losses in 3 the oil and gas industry or in supporting industries. He 4 refers to a previous study of his where he used the IMLAN 5 model to quantify the economic impacts of the western oil 6 and natural gas industry on the economy in the United 7 States. 8 And as I explained in my written rebuttal 9 testimony, that analysis applied to oil and gas operations 10 in 13 states, not just New Mexico. In his analysis of the 11 potential impacts associated with Part 50, Mr. Dunham does 12 not clarify whether he used New Mexico multipliers, or 13 multipliers that represent the 13 Western states to 14 consider economic impacts. And I'll just explain that 15 multiplier refers to the ratio between an induced economic 16 impact and a direct impact. And that's, you know, a 17 little more detail is that induced impacts occur when 18 workers involved in direct and indirect activities spend 19 their wages in the local economy. 20 So it would be appropriate to use multipliers 21 specific to New Mexico; however, Mr. Dunham does not 22 provide the information I would need to determine whether 23 or not that's what he did. 24 He also does some modeling outside of the IMLAN 25 model, and again doesn't provide enough information on the	772 1 majority of costs will be incurred in the first year. In 2 addition to the explanation I provided regarding industry 3 typically financing costs over the useful life of 4 equipment, Ms. Lackner explains that NMED allows operators 5 up to seven years to phase-in control requirements. 6 Third, Ms. Lackner's testimony points out that 7 industry compliance costs may be offset by revenues 8 received from captured gas. She indicates that this 9 figure could be as high as 300 million per year. And then 10 this is a cost savings that is not accounted for in 11 Mr. Dunham's analysis. 12 Fourth, Ms. Lackner explains that social costs 13 are not considered in Mr. Dunham's analysis. And while I 14 can't comment on EDF's dollar estimate, I agree that 15 avoiding the social costs, for example, climate damages, 16 environmental and health effects of oil and gas operations 17 would be a benefit of the rule that can be quantified and 18 monetized at least to some extent. 19 Fifth and finally, Ms. Lackner is in agreement 20 that Mr. Dunham's analysis input/output model has 21 limitations and that Mr. Dunham neither explains the 22 assumptions of his model, nor tests the strengths of these 23 assumptions. She also raises the idea of listing 24 supporting research that the proposed rule could lead to 25 job creation in the methane mitigation industry.

773 1 MS. KATZ: Thank you, Ms. Day and Mr. Palmer. I 2 have no further questions. 3 HEARING OFFICER ORTH: All right. Thank you, 4 Ms. Katz. 5 Madam Chair, we do need to take something of a 6 lunch break before the 1:00 public comment period. I can 7 certainly see if the first few parties have brief 8 questioning to get us closer to 12:30, but we're not going 9 to be able to get through cross-examination before -- 10 before we need to break for lunch. Is your preference to 11 break now? 12 CHAIRPERSON SUINA: Yes, Madam Hearing Officer, 13 that would be my preference, just because there's been a 14 lot of information and I don't want to break up her 15 cross-examination or the gentleman's cross-examination. 16 HEARING OFFICER ORTH: All right. Thank you, 17 all. We are on break until 1. At 1:00, I'll begin with 18 just a few public commenters and then we'll return to the 19 questioning of Ms. Day and Mr. Palmer. Thank you, all. 20 (Recess taken from 12:12 p.m. to 12:57 p.m.) 21 HEARING OFFICER ORTH: Let's come back from the 22 break, please. We've reached the 1:00 public comment 23 period. And the folks I have who reached out by email to 24 request an opportunity to offer comments were Adrienne 25 Sandoval, Juan Garcia, Robert Lewis, Kathy Miller, Marilyn	775 1 please raise your right hand. And do you swear or affirm 2 to tell the truth? 3 MR. GARCIA: Yes. 4 HEARING OFFICER ORTH: All right. I'm going to 5 start your five minutes right now. 6 JUAN GARCIA, 7 having been first duly sworn or affirmed, 8 gave public comment as follows: 9 PUBLIC COMMENT BY JUAN GARCIA 10 MR. GARCIA: Yes. My name is Juan Garcia, and 11 the reason why I'm calling is because the oil and 12 petroleum industry impacts us favorably because of our 13 utilization of our various vehicles that we use to drive 14 in and go to work. Okay? So we have a -- we work in a 15 small business, and we try to do -- yes, I would say we 16 have to go to different locations to help out with yard 17 cleaning, shrubs, trees, and those kind of things. So the 18 high price of gas petroleum is, obviously, impacting us 19 today because it's -- we can't charge that much for the 20 work that we do, yet we have to pay for the gas and use 21 the fuel, which is -- which is where we are mostly 22 impacted. That's pretty much it. 23 HEARING OFFICER ORTH: Thank you very much, 24 Mr. Garcia. 25 MR. GARCIA: Thank you.
774 1 O'Boyle, Tom Williams, and I believe I have another one 2 who reached out on Chat, Katherine or Kathleen Moseley. 3 If you did not reach out by email and I did not 4 just call your name, that's fine. I will issue a general 5 invitation to anyone on the platform. If I did not call 6 your name, please reach out by Chat, and if you have any 7 troubles with the Chat function, please reach out to 8 Pamela Jones at (505) 660-4305. 9 Public comment, like all testimony in the Board 10 hearings, is taken under oath and is limited to five 11 minutes. So let me find Ms. Sandoval. I am not seeing 12 Ms. Sandoval at the moment. Let me move to Mr. Garcia. 13 And by the way, if -- if anyone who signed up 14 isn't here, I'm happy to take their comments at another 15 time. They need only let me know that they are on the 16 platform. Mr. Garcia, I am unmuting you. 17 MR. GARCIA: Thank you. 18 HEARING OFFICER ORTH: Can you hear me? 19 MR. GARCIA: Yes, I can. 20 HEARING OFFICER ORTH: Oh, good. And your voice 21 is loud and clear, but I'm hearing some feedback of some 22 kind. 23 MR. GARCIA: I can't hear the feedback. Can you 24 hear me okay? 25 HEARING OFFICER ORTH: Okay. So if you will	776 1 HEARING OFFICER ORTH: Let's see. Now I will 2 move to -- sorry, I have to switch between screens here. 3 Robert Lewis. Let me see if Mr. Lewis is on the platform. 4 Let's see. I don't see a Robert Lewis. Let me see if 5 maybe he came in as Bob. No, I don't see him under either 6 of those names. 7 Kathy Miller. Let's see if I see a Kathy Miller. 8 No. Marilyn O'Boyle, I did see Marilyn O'Boyle. All 9 right. Ms. O'Boyle, I am unmuting you. Can you hear me? 10 MS. O'BOYLE: Yes, I can. 11 HEARING OFFICER ORTH: Terrific. Would you raise 12 your right hand, please. Do you swear or affirm to tell 13 the truth? 14 MS. O'BOYLE: Yes. 15 HEARING OFFICER ORTH: Thank you very much. I'm 16 going to start your five minutes right now. 17 MARILYN O'BOYLE, 18 having been first duly sworn or affirmed, 19 gave public comment as follows: 20 PUBLIC COMMENT BY MARILYN O'BOYLE 21 MS. O'BOYLE: Okay. I actually think it's about 22 two minutes, but that's fine. Okay. I'm happy to address 23 the members of the Environmental Improvement Board. My 24 name is Marilyn O'Boyle and I'm a member of First 25 Unitarian Church of Albuquerque. And I'm the Chair of our

777 1 environmental committee. I have five grown children and 2 nine grandchildren, some of them living close by, some in 3 other states. 4 I am very concerned about methane pollution in 5 our state. We all need to work together to correct the 6 huge problem of global climate change. Ozone and methane 7 from wells in our state contribute to this problem. New 8 Mexico is home to some of the worst methane pollution in 9 the country. Oil and gas operators release 1.1 million 10 metric tons of methane through venting, flaring and leaks. 11 Methane is a powerful greenhouse gas that is 84 times more 12 potent than carbon dioxide in the short-term. 13 Our children are disproportionately impacted by 14 pollution from oil and gas operations, including ozone 15 forming toxins that worsen respiratory diseases and 16 trigger asthma attacks. One of my grandchildren has 17 asthma. Ozone or smog can also worsen emphysema and cause 18 heart disease. 19 These wells have a terrible and immediate effect 20 on the health and well-being of people living close by. 21 There are some federal bills in the works, but we need to 22 support and strengthen our local bills to protect families 23 living close by and also to protect the air and health of 24 everyone long-term. This is a moral and ethical issue, 25 and we can no longer delay our responses.	779 1 HEARING OFFICER ORTH: A lot of videos cut out 2 there for a moment. I'm sorry. Ms. Moseley did you 3 speak? 4 MS. MOSELEY: Yes. 5 HEARING OFFICER ORTH: Okay. 6 MS. MOSELEY: It's M-O-S-E-L-E-Y. 7 HEARING OFFICER ORTH: Thank you very much. 8 Would you raise your right hand? Do you swear or affirm 9 to tell the truth? 10 MS. MOSELEY: I do. 11 HEARING OFFICER ORTH: Thank you very much. I'm 12 going to start your five minutes now. 13 KATHLEEN MOSELEY, 14 having been first duly sworn or affirmed, gave 15 public comment as follows: 16 PUBLIC COMMENT OF KATHLEEN MOSELEY 17 MS. MOSELEY: Thank you. I'm a registered nurse 18 and have worked in asthma education in our state, around 19 the state for about 13 years. In 2018, I'm aware that the 20 American Thoracic Association quoted a cost of asthma to 21 our whole country as 80 billion dollars annually, 22 including medical expenses, missed work, school, deaths, 23 and that was from a CDC report called "The economic burden 24 of asthma in the U.S. from 2008 to 2013," and based on a 25 survey of people with asthma.
778 1 New Mexico's -- New Mexicans are already 2 experiencing severe impacts of climate change, harming our 3 health, air, land, water and economy. Sciences, NASA, the 4 Department of Defense all agree that climate change is a 5 threat to our kids' future and we can no longer ignore the 6 increasingly strange and severe weather. 7 As the IPCC report emphasized, this really is 8 code red for the planet. I support strong methane rules 9 and thank the Environmental Improvement Board for this 10 hearing. 11 HEARING OFFICER ORTH: Thank you very much, 12 Ms. O'Boyle. 13 And, Theresa, Marilyn is the standard spelling. 14 O'Boyle is O'B-O-Y-L-E. 15 Let me move to Mr. Williams in the event he's 16 here. No. Let me see if perhaps Ms. Sandoval has joined 17 us. This takes a moment to scroll through names. No. 18 And let's see. I believe it was Ms. Moseley was the other 19 one. Yes, Kathleen Moseley. 20 Ms. Moseley, I am unmuting you. Can you hear me? 21 MS. MOSELEY: Yes. Can you hear me? 22 HEARING OFFICER: Very, very clearly. Thank you. 23 Would you spell your last name? 24 MS. MOSELEY: Yes. My last name is Moseley: 25 M-as-in-Mark, O-S-as-in-Sam, E-L-E-Y.	780 1 And our own asthma program has looked at the 2 number of ED visits and hospitalizations. And I know for 3 the report I have here at home on hand, about 7,700 ED 4 visits on the average were calculated to be done in 2010 5 to '12, and about 1,800 hospitalizations per year. 6 And I'm very curious, listening to the economic 7 modeling about how these costs are figured into the 8 various economic models. And I do know, I'm aware that 9 ozone has increased the number of ED visits from work that 10 was done at UNM in our own state. So I'm wondering how 11 they're looking at weighing those costs, especially as the 12 previous person said, New Mexico releases a large amount 13 of methane, which impacts beyond our state. So that's my 14 question. 15 HEARING OFFICER ORTH: All right. Thank you, 16 Ms. Moseley. For the moment, it will remain a question 17 hanging in the air. And we'll see if any of the parties 18 would like to address that. And thank you for your 19 comment. 20 MS. MOSELEY: Thank you. 21 HEARING OFFICER ORTH: I'm sorry, I'm looking at 22 too many screens. I do not have anyone else reaching out 23 through the Chat who indicated a desire to offer public 24 comment at this 1:00 session. I am happy to accept public 25 comment at every other 9:00, 1:00 and 5:00 public comment

781 1 session. (Inaudible.) 2 COURT REPORTER: Madam Hearing Officer, we can't 3 hear you. 4 SUINA CHAIRPERSON: Ms. DuBois, I'm Chatting with 5 her. Oh, there she is. 6 HEARING OFFICER ORTH: I'm sorry, Madam Chair. 7 This is now the second time in the last few minutes this 8 has happened. It's just everyone's video except mine 9 blanks out, and I'm not sure what's happening. 10 CHAIRPERSON SUINA: Yes, Madam Hearing Officer, I 11 think we can see everybody and I don't know if it's your 12 connection. 13 HEARING OFFICER ORTH: Okay. Thank you for that. 14 I'm not -- I will say I'm not getting the, you know, the 15 little box that pops up that says your bandwidth is low or 16 anything, but it's entirely possible. So let me just 17 mention, as the last resort, if in fact it's my connection 18 that is bad and the event comes to a stop, I'm very sorry 19 about the inconvenience, but I would do my best to get 20 right back on the platform, and would encourage all of you 21 to do the same. And we won't start until we know that we 22 have the folks we need. So I'm not sure what's happening 23 there. 24 All right. Let's return to the technical case. 25 Ms. Katz, we need Ms. Day and Mr. Palmer for	783 1 MR. HISER: So I think I'll start with Mr. Palmer 2 for the first couple of questions, and then move to 3 Ms. Day. So I guess I'll ask this because Ms. Katz asked 4 this of our expert. Mr. Palmer, you are a consultant; is 5 that correct? 6 MR. PALMER: That is correct. 7 MR. HISER: And you're being paid to provide this 8 testimony for NMED? 9 MR. PALMER: That is correct. 10 MR. HISER: Now, you said that most of the work 11 that you have done as an employee of ERG has been working 12 to support government rulemaking; is that correct? 13 MR. PALMER: That is. 14 MR. HISER: Okay. And are there differences 15 between how the government might collect information to 16 come up with cost studies, versus how the private sector 17 might have to do it? 18 MR. PALMER: I believe there would be. 19 MR. HISER: Okay. And so, do you sometimes 20 receive governmental requests for information that are 21 transferred to you in order for you to conduct the 22 analysis that you might do in support of a regulatory 23 analysis? 24 MR. PALMER: Yes. 25 MR. HISER: And you also -- do you also undertake
782 1 their questioning. 2 MS. KATZ: Yes, Madam Hearing Officer. I see 3 Mr. Palmer. There they are. 4 HEARING OFFICER ORTH: All right. And let me 5 turn first to Ms. Fox. Ms. Fox, do you have questions of 6 this panel? 7 MS. FOX: No, Madam Hearing Officer. Thank you. 8 HEARING OFFICER ORTH: Thank you. Ms. Paranhos? 9 MS. PARANHOS: Sorry, I couldn't find my mute 10 button, but no questions. Thank you. 11 HEARING OFFICER ORTH: Thank you. Mr. Jaynes? 12 MR. JAYNES: No questions, Madam Hearing Officer. 13 HEARING OFFICER ORTH: Thank you. Ms. Devore? 14 May not be on. Mr. Nykiel? 15 MR. NYKIEL: No questions. Thank you. 16 HEARING OFFICER ORTH: Thank you. Mr. de 17 Saillan? 18 MR. DE SAILLAN: No questions. Thank you. I 19 want to thank both of these witnesses for their testimony. 20 HEARING OFFICER ORTH: Thank you. Mr. Hiser? 21 MR. HISER: I do have a few questions, Madam 22 Hearing Officer. 23 HEARING OFFICER ORTH: All right. Go ahead. 24 CROSS-EXAMINATION OF BRIAN PALMER AND SUSAN DAY 25 BY MR. HISER:	784 1 literature surveys of information that's in the published 2 literature to determine costs of certain things like 3 control technologies or control techniques? 4 MR. PALMER: Yes. 5 MR. HISER: And are those often based on 6 anonymized surveys of private information? 7 MR. PALMER: It depends on the source. 8 MR. HISER: Okay. When you were preparing the 9 costs that you used sort of as a reference point for your 10 critique of Mr. Dunham's costs in Table 7, and you looked 11 at the compressor costs in his table, which reports to be 12 \$55 dollars, is that actually the cost of a compressor 13 change to make the changes required by this rule? 14 MR. PALMER: No, not at all. 15 MR. HISER: And so, that was just the -- go 16 ahead, I'm sorry, I didn't mean to talk over you. 17 MR. PALMER: I think the average cost of a -- 18 average cost per compressor would be quite a bit more than 19 \$55. 20 MR. HISER: So that's probably, at some level, a 21 cost that's just been taken and then divided on a per well 22 count, apparently? 23 MR. PALMER: That's my understanding of Table 7. 24 MR. HISER: Okay. And, similarly, if we were to 25 look at the costs of retrofitting, say, an engine, you

785 1 would expect that to be more than the \$1,336 that's shown 2 here? 3 MR. PALMER: That's correct. 4 MR. HISER: One last question for you, I think. 5 You talked about when you did the ERG work for the costs 6 that were done in the Department's place, that you looked 7 at the permit database the Department had for the number 8 of facilities; is that correct? 9 MR. PALMER: Yes. Those data were downloaded 10 from the Department's database by Department staff and 11 then transferred to -- well, they were -- they were 12 transferred to us. They were shared with us. Those are 13 the same data that are in the spreadsheets that the 14 Department has posted since, I believe, the beginning of 15 June. 16 MR. HISER: Uh-huh. And can you tell me, 17 Mr. Palmer, whether that's just the permit database or 18 does that include the Notice of Intent database as well? 19 MR. PALMER: It does include facilities that are 20 marked as NOIs or Notice of Intent. 21 MR. HISER: Great. Thank you. I guess that 22 completes my questions for you. 23 I've got a couple questions for Ms. Day if she's 24 with us as well. All right. I'm not seeing you, but -- 25 ah, there you are.	787 1 actually. I'm sorry, Ms. Day is actually on travel and in 2 England and has been out of the country since the end of 3 last week. So I -- the difference there is that the costs 4 in the slide that I -- that I helped prepare, reflect 5 updated costs to reflect changes in the version of the 6 rule that was filed on September 6th. And in particular, 7 there was a big reduction in the cost for engines and 8 turbines, the smaller reduction costs for storage vessels 9 and a very, very small change in cost for heaters. The 10 big difference was in the engines and turbines cost. 11 And so there was a slight discrepancy between my 12 preparation of the slides and the testimony, so I -- those 13 updated costs, I believe, will be submitted as exhibits 14 when we do get to those sections. So, just to hopefully 15 avoid a lengthy conversation here. 16 MR. HISER: Okay. Well, thank you for that 17 clarification. Yes, thank you, Mr. Palmer, for that 18 clarification. 19 When you did that recalculation of the cost, 20 Mr. Palmer, did you reconsider the administrative costs of 21 the addition of, for example, the annual compliance 22 certification on the administrative side, or did you just 23 look at the capital costs side? 24 MR. PALMER: These are the capital and annual -- 25 annual operation and maintenance costs is usually what we
786 1 Good afternoon, Ms. Day. Thank you for joining 2 us. In page two of your testimony in Rebuttal Exhibit 19, 3 did you agree that even your analysis tended to show an 4 estimated cost potentially as high as about 1.7 billion 5 dollars over five years at the bottom of that page? 6 MS. DAY: I believe I did, yes. 7 MR. HISER: Okay. And I believe in the 8 demonstrative exhibit that accompanied you, it showed a 9 1.2. Was that probably just a clerical error? 10 MS. DAY: I am not aware of that. 11 MR. HISER: You may not -- yeah, you may not have 12 been able to see it because sometimes if you're 13 presenting, you don't get to see what's on the screen. 14 Okay. But the 1.7 is the number that you are testifying 15 to today, correct? 16 MS. DAY: Let -- let me just clarify that the 1.7 17 was the five-year cost assuming our -- the ERG estimate 18 of, I believe, it was 338 million per year. 19 MR. HISER: I believe that's what you said, yes. 20 Okay. Thank you. 21 And then, Ms. Day, in evaluating the accuracy -- 22 yes. 23 MR. PALMER: I'm sorry. 24 MR. HISER: Yes. 25 MR. PALMER: I can address that question as well,	788 1 consider, and in very -- in a lot of those, the cost 2 inputs that we use which very often come from preexisting 3 documents, such as the EPA cost analyses, there's very 4 often a line item for administrative and management costs, 5 so -- but we did not include a separate line item for the 6 compliance certifications for this rule. 7 MR. HISER: Okay. So it's sort of a partial 8 update to reflect changes in the rule; is that a fair 9 characterization? 10 MR. PALMER: I think, yes, it's -- its focus -- 11 it's been equipment-focused, let's say that. 12 MR. HISER: Thank you, that's very helpful. 13 And then either Mr. Palmer or Ms. Day, because 14 I'm not sure which of you would be better here to answer 15 this, have you looked at any changes in equipment and 16 installation costs that have occurred in the most recent 17 period, say 2020 through 2021, or are most of your costs 18 based on costs that were developed prior to that period, 19 and then inflated to this period? 20 MR. PALMER: I can respond to that one. The 21 costs are -- what we've been using is the chemical 22 engineering -- chemical engineering plant cost index to -- 23 I don't want to say the word "inflate"; to update the 24 costs from when they were originally developed, to -- in 25 our case, we used 2019, given when we started this

789 1 project, which was 2020. 2 We do recognize, of course, that the last couple 3 of years have been a little extraordinary, in terms of the 4 availability of raw materials, et cetera. So we have not 5 attempted at this point to update those costs to reflect 6 the unusual circumstances of our current situation, if 7 that's what you're implying, sir. 8 MR. HISER: Thank you, Mr. Palmer. You saved me 9 having to ask the question. Appreciate that. 10 Ms. Day, on page 14 of your rebuttal testimony, 11 you stated that, "Given that investments in equipment are 12 typically spread out by affected owners and operators, a 13 more realistic assumption would be that the cost of 14 regulation can be spread out more evenly over the 15-year 15 useful life time frame." 16 Do you recollect making that statement in your 17 testimony? This is on page 14. 18 MS. DAY: Yes, I do. 19 MR. HISER: Does the NMED proposal, with the 20 exception of engines and turbines and pneumatics provide 21 15 years to comply with any provision? 22 MS. DAY: I don't think I can answer that 23 question. 24 MR. HISER: Okay. So you're not aware of the 25 time frame for implementation, set forth in the proposal	791 1 what that means; that the EPA practice is what's informing 2 your thought process, or what is informing your thought 3 process? 4 MS. DAY: The standard analytical structure 5 that's used in a regulatory impact analysis by the federal 6 government by EPA. 7 MR. HISER: Okay. And are you aware, if I may 8 represent this, that that EPA standard process, it 9 requires us to treat all capitals having no cost? 10 MS. DAY: I am not aware of that. 11 MR. HISER: Okay. Does that influence, perhaps, 12 your thoughts about this? 13 MS. DAY: I -- I don't think I could comment on 14 that at this time. 15 MR. HISER: Okay. Thank you. 16 And then, Ms. Day, in criticizing Mr. Dunham's 17 job impact analysis, did you offer an alternative job loss 18 analysis in your testimony? 19 MS. DAY: I was not asked to provide that. 20 MR. HISER: So you were just asked to provide a 21 critique of Mr. Dunham's analysis? And not to do -- 22 MS. DAY: I was asked to review -- I was asked to 23 review his analysis. 24 MR. HISER: Okay. I believe that's all my 25 questions, Madam Hearing Officer.
790 1 in any detail? 2 MS. DAY: Not in -- not specifically. 3 MR. HISER: Okay. So how would we know that 4 industry could spread its time over that length of time? 5 MS. DAY: Industry has the ability to -- to 6 obtain financing and -- and spread that financing out. It 7 is my understanding that that can be separate from the 8 time frame of the rule itself. 9 MR. HISER: And do you have any studies or 10 documentation about the prevalence of that practice or how 11 much of this would be expensed or the additional costs 12 that would be incurred by trying to finance in that way? 13 MS. DAY: The -- the U.S. Environmental 14 Protection Agency, when they do studies of the -- when 15 they issue regulations and they do regulatory impact 16 analyses, typically, use this assumption when they are 17 estimating the costs to the affected industry and they are 18 annualizing those costs. This is the time frame that they 19 typically use. 20 MR. HISER: And so, Ms. Day, your position here 21 is based not on anything other than your understanding of 22 EPA practice? 23 MS. DAY: I would say that that is an important 24 part of what informs that thought process on my part. 25 MR. HISER: And -- okay. I guess I'm not sure	792 1 Thank you, Mr. Palmer, Ms. Day. You were both 2 very helpful. 3 HEARING OFFICER ORTH: Thank you, Mr. Hiser. 4 Mr. Rose, do you have questions of this panel? 5 MR. ROSE: I do not, Madam Hearing Officer. 6 HEARING OFFICER ORTH: Thank you. Mr. Janoe? 7 MR. JANOE: No questions, Madam Hearing Officer. 8 HEARING OFFICER ORTH: Thank you. Mr. Butzier? 9 MS. SHEEHAN: Madam Hearing Officer, this is 10 Christina Sheehan, the GCA -- the GCA has no questions. 11 Thank you. 12 HEARING OFFICER ORTH: Thank you, Ms. Sheehan. 13 Ms. Gutierrez? 14 MS. GUTIERREZ: No questions. Thank you. 15 HEARING OFFICER ORTH: Thank you. 16 Mr. Colclasure? 17 MR. COLCLASURE: No questions, Madam Hearing 18 Officer. 19 HEARING OFFICER ORTH: Thank you. And 20 Ms. Witherspoon? She's not here. 21 Let's move then to the Board members for their 22 questions. While I'm doing that, please, if you are on 23 the platform and you are not a panelists, you can indicate 24 that you have a question by reaching out through the Chat. 25 Madam Chair, do you have questions of the panel?

793 1 CHAIRPERSON SUINA: Good afternoon, Madam Hearing 2 Officer. Yes, I have a couple of questions. 3 EXAMINATION BY THE BOARD OF SUSAN DAY AND BRIAN PALMER 4 CHAIRPERSON SUINA: Let me scroll my pages here. 5 Just so that I'm clear, I think it's follow-up to 6 Mr. Hiser's question. And this would be for either 7 Mr. Palmer or Ms. Day. So you were only asked by NMED to 8 review Mr. Dunham's analysis and -- is that correct? 9 MS. DAY: Are you referring to all of the work 10 conducted by ERG? 11 CHAIRPERSON SUINA: Yes. 12 MS. DAY: In total, I can tell you that I also 13 analyzed, prepared and -- sorry, obtained and prepared 14 some data that are used in the small business definition, 15 and brought -- and provided feedback on Mr. Dunham's 16 analysis. 17 And Mr. Palmer can explain all of the ways that 18 he's involved. 19 CHAIRPERSON SUINA: That would be great. Thank 20 you. Mr. Palmer? 21 MR. PALMER: I was -- among many other things I 22 was asked to review Mr. Dunham's economic impact analysis. 23 CHAIRPERSON SUINA: Thank you for that. And I 24 think my follow-up question is, so was a separate -- just 25 so I'm not confused; was there a separate analysis done	795 1 CHAIRPERSON SUINA: And that's -- thank you so 2 much, Mr. Palmer. And that cost, is that cost industry 3 cost or is that cost to the State of New Mexico? In terms 4 of that? 5 MR. PALMER: That is -- that is the expected -- 6 the 215 million dollars is the expected annual cost to the 7 industry in terms of the annualized capital costs of 8 either retrofitting equipment or buying control devices 9 and then also an annual estimate of operation and 10 maintenance costs. 11 CHAIRPERSON SUINA: Is there included in that 12 cost, just so I'm clear, is that additional -- you know, 13 in Mr. Dunham's analysis looking at additional 14 administrative costs related to some of the reporting 15 requirements that are proposed? 16 MR. PALMER: There's not a -- we did not do a 17 separate cost; however, very often within those cost 18 estimates that we begin with there is very often a line 19 item for administrative and management costs. 20 Excuse me, I'm just going to shut this other 21 door. 22 CHAIRPERSON SUINA: Were you going to add more, 23 Mr. Palmer? 24 MR. PALMER: No. There's -- no, as I said, the 25 cost estimates that we start with, you know, which very
794 1 based upon, I would say, some of the numbers that you 2 were -- you know, some of the, I guess, readily-available 3 data and numbers? 4 MR. PALMER: So, for each of -- each part of the 5 rule that addressed a different emission source type, so, 6 for example, engines and turbines, dehydrators, storage 7 tanks, et cetera, I guess there's, you know, 15 different 8 sections of the rule that are specific to a certain type 9 of equipment, we estimated both cost and emission 10 reductions, because an important variable that I think 11 people will talk about is the cost per ton of VOC or NOx 12 reduced. And so, that's -- that is what we calculated. 13 And then we also did attempt to estimate a total annual 14 cost for the rule going forward. 15 CHAIRPERSON SUINA: Thank you for that, 16 Mr. Palmer. And in that estimation, I just want to make 17 sure I'm clear. In one of the slides that was presented, 18 Mr. Dunham's estimate was 3.8 billion, and then ERG, as 19 you said, there was a difference in what Ms. Day was 20 referencing, but in today's slide you estimated 215 21 million per year? 22 MR. PALMER: That is correct. 23 CHAIRPERSON SUINA: Over five years and that 24 would be no more than 1.1 billion; is that correct? 25 MR. PALMER: Correct, yes.	796 1 often come from the federal -- a federal regulatory 2 project, for example, they often include a line item for 3 administrative and management costs within those cost 4 estimates. 5 CHAIRPERSON SUINA: Thank you, Mr. Dunham. [sic] 6 And so, I think it was referenced that earlier in the 7 verbal testimony before lunch, he had shared that you 8 work -- ERG works with other governments, in terms of 9 other regulations and rules and cost analysis related to 10 those other regulations and rules. Could you share with 11 us how many states you've provided an analysis for? 12 MR. PALMER: That's a -- can you restate the 13 question? I'm not sure what your question is. 14 CHAIRPERSON SUINA: Yeah. I apologize, 15 Mr. Palmer. I'm just wondering how many states, and if 16 you can't give a specific number, is it less than ten or 17 more than ten? 18 MR. PALMER: I have worked on -- in the last 30 19 years, I have worked on regulatory projects probably 20 covering somewhere between 15 and 20 different source 21 categories. As a company, we've been supporting the 22 federal EPA's Clean Air Act regulatory development for 40 23 years. 24 We've supported the EPA in developing emissions 25 standards for more source categories than I could count.

797 1 I mean, I've personally worked on secondary lead smelting, 2 municipal waste combustion, fiberglass boat manufacturing, 3 oil and gas, numerous surface coating categories. 4 Controls as a part of enforcement actions for automobile 5 shredders. 6 So, yeah, I'm not sure what -- whether you're 7 asking for the breadth of our experience or whether we've 8 done oil and gas cost estimates for other states. 9 CHAIRPERSON SUINA: Yes. It's the oil and gas 10 costs. 11 MR. PALMER: No, I don't think we have. 12 CHAIRPERSON SUINA: Okay. Okay. That's what I 13 wanted to know. 14 MR. PALMER: And I have not, personally. 15 CHAIRPERSON SUINA: Okay. What about you, 16 Ms. Day? 17 MS. DAY: Sorry about that. I have not worked on 18 oil and gas estimates for other states. 19 CHAIRPERSON SUINA: Okay. Thank you so much for 20 that. I appreciate your time and both of your testimony. 21 And thank you so much, Madam Hearing Officer, those are 22 the questions I have for now. 23 HEARING OFFICER ORTH: Thank you very much. 24 Vice-Chair Trujillo-Davis, do you have questions of this 25 panel?	799 1 I'm done for now. Thank you. 2 HEARING OFFICER ORTH: All right. Thank you. 3 Member Cates? 4 BOARD MEMBER CATES: Yeah. Chair Suina and 5 Member Trujillo-Davis kind of brought up some stuff I was 6 wondering about and it's been covered. But, generally, 7 then, Mr. Palmer and Ms. Day, so -- so my question is -- 8 it goes to your critique of the study presented by the 9 gentleman this morning, whose name I'm forgetting, I'm 10 sorry. But your direction to us, if I understand you, was 11 to not take it -- not take it seriously, not take it too 12 seriously -- some of the estimates and the numbers that we 13 saw in that testimony; is that a fair characterization? 14 MR. PALMER: Yes, that's what I stated in my 15 testimony this morning. 16 BOARD MEMBER CATES: Would it be kind of going 17 too far to say that the report and the testimony we heard 18 this morning is just perhaps a piece of alarmist fiction? 19 Would you go that far? 20 MR. PALMER: I would not say that. I would just 21 say that it's not -- it was not well documented where the 22 costs came from and how the analysis was created. 23 BOARD MEMBER CATES: So it's thin, it's pretty 24 lightweight stuff; is that fair to say? 25 I suppose I'm putting words in your mouth, but
798 1 VICE-CHAIR TRUJILLO-DAVIS: Yes. I only have a 2 couple, they're just clarifications. I apologize, 3 Mr. Palmer, I was curious in your scope from NMED, did you 4 receive any instructions to do a job impact analysis or a 5 cost impact analysis to the state as far as lost revenue 6 or lost jobs? 7 MR. PALMER: We were not. 8 VICE-CHAIR TRUJILLO-DAVIS: Okay. So I guess my 9 next question is probably for Ms. Katz. Does that 10 information exist in one of the exhibits somewhere that we 11 could look at or reference? 12 MS. KATZ: Member Trujillo-Davis, the only 13 information -- the information that was provided by the 14 Department is all in the cost estimates, and that was the 15 information that the Department provided consistent with 16 the requirements of the statute. 17 VICE-CHAIR TRUJILLO-DAVIS: Okay. So just to be 18 clear, there's no impact for jobs and no impact to the 19 state? 20 MS. KATZ: Correct. There was no -- there was no 21 full -- there was no -- yeah, that type of -- we did not 22 have that type of economic analysis. We -- we simply 23 provided the costs and emissions reductions estimates. 24 VICE-CHAIR TRUJILLO-DAVIS: Okay. Thank you very 25 much for that. I may have some more questions later, but	800 1 I'm just trying to really get down to the, you know, the 2 grit of it. 3 MR. PALMER: I cannot answer beyond the 4 information that we had to evaluate. 5 BOARD MEMBER CATES: Okay. Yeah, that's all I 6 have. Thank you, sir. 7 HEARING OFFICER ORTH: Thank you. Member Bitzer? 8 BOARD MEMBER BITZER: A couple of things. When I 9 heard clarification about the 1.7 billion dollar figure 10 over five years, versus the 1.1, and then because 11 originally in the verbal testimony I heard 1.7, but I saw 12 1.1, and that reconciled, it seemed to me, with the 13 annual, the 200-some million versus the 300 million. 14 We're -- we're settling on the 1.1 billion now or the 1.7 15 billion? 16 MR. PALMER: We estimate that the cost over five 17 years would be 1.1 billion. 18 BOARD MEMBER BITZER: Okay. So, yeah, I 19 misunderstood the explanation about who had done what. 20 When you said she was at -- Ms. Day was in England, I 21 thought maybe we had a pounds to dollars conversion or 22 something going on there. And I was like, well, that 23 would make it even worse because the pound is still above 24 the dollar I think, so... 25 For New Mexico specifically -- if you happen to

801 1 know -- I guess the discrepancy between the two reports is 2 larger, in terms of the number of wells in the natural gas 3 realm than it is in the oil realm. It was like two -- are 4 the -- is a well a well a well, or is one type of well 5 typically a larger economic footprint than the other? Is 6 a natural gas well a bigger deal than an oil well, or is 7 an oil well a bigger deal than a natural gas well in New 8 Mexico, do you suppose? 9 MR. PALMER: I don't believe I could answer that 10 question for you. 11 MS. DAY: And I don't believe I could either. 12 BOARD MEMBER BITZER: Industry may at some later 13 point may have an answer for me on that, or a suggestion. 14 I thought I read that into their -- into earlier testimony 15 and data about -- because it seems to me there was a big 16 discrepancy in the natural gas well count and not so big 17 in the oil count. If oil wells are minor compared to 18 natural gas wells, then that would just exacerbate the 19 gap, and vice versa. Anyway, that's all I have. 20 HEARING OFFICER ORTH: Thank you. Member Garcia? 21 BOARD MEMBER GARCIA: Yes, Madam Hearing 22 Officer. Yes, thank you. So let's see. Mr. Palmer, I do 23 have a question -- for either one of you, I guess. You 24 did make the statement that the Board should give no 25 weight to Dunham's estimates. That's a pretty strong	803 1 to explain to the Board, and so we don't know if those -- 2 I -- I can't -- I mean, just based on the inputs that are 3 in Table 7, which don't line up with ERG's cost estimates 4 on individual items or the total, and then I'm not an 5 economic modeler, but there is no connection, there's no 6 clear path or mechanism between those costs in Table 7, to 7 the economic impacts that he puts out in table -- which 8 table was it -- in Tables 11 or 12. So I mean that's -- 9 that's all I can say is that there's -- given the 10 uncertainty in the inputs for Table 7, we don't know 11 whether you could -- what to do with the outputs that are 12 in the later tables. That's all I can say. 13 BOARD MEMBER GARCIA: Okay. Thank you. That's 14 all my questions. Thank you. 15 HEARING OFFICER ORTH: Thank you, Member Garcia. 16 Member Honker? 17 MEMBER HONKER: Yeah, just -- just one question, 18 for Mr. Palmer, I believe. When you were talking about 19 having done your recent recalculation of costs based on 20 the most recent edits to the proposed rule that NMED did, 21 it seemed like when you were questioned about materials 22 costs, I think from the NMOGA counsel, I believe you said 23 your materials costs were based on 2019 data. Was -- do I 24 recall that correctly? 25 MR. PALMER: Thank you for the question. What I
802 1 statement, and I understand part of it is because they 2 overstated the number of wells, et cetera. You identified 3 some of the misleading numbers that they were using and 4 then you also noted that there were a lot of assumptions 5 you just don't know about because they didn't give any 6 detail about the model, the assumptions in the model, the 7 input data for the model, et cetera. 8 So if you had that information and you understood 9 better how he came up with those numbers, would it be 10 possible that you could accept some of the information 11 that he provided? 12 MR. PALMER: I think that would be -- that would 13 be fair, yes. 14 BOARD MEMBER GARCIA: Okay. So -- so let me ask 15 you again, when you say the Board should give no weight to 16 Mr. Dunham's estimates, you mean absolutely nothing in his 17 report should we pay attention to, it's all garbage? 18 MR. PALMER: There -- there were no data provided 19 except the cost numbers in Table 7 and no explanation of 20 where those data came from and how they were generated, 21 how they relate to the cost estimates that have already 22 been provided from the Department, and then the model that 23 extrapolates from those cost data to those employment 24 figures that he has and the change in tax revenue. 25 So there's no -- there's no linkage between those	804 1 did was, our costs inputs -- our costs methodologies were 2 often taken from previously completed EPA cost estimates. 3 And then, and those were done in earlier years, and then 4 we started this project in 2020 and we scaled those 5 numbers up from those earlier years to 2019, using the 6 Chemical Engineering Plant Cost Index. And then the 7 comment was about the supply-side issues that we're having 8 right now related to the pandemic, I believe, and so we 9 did not attempt to correct those. I think that would be 10 an interesting, but difficult analysis. Things are 11 changing quickly. 12 BOARD MEMBER HONKER: Well, I can see where it 13 would be difficult to project that out over years, not 14 knowing what the market is going to do, but it does sound 15 like if they're -- it sounds like there's a potential that 16 your 1.1 billion number is on the low side, if indeed, 17 supply costs and even labor costs have gone up over the 18 last couple of years; is that a fair statement? 19 MR. PALMER: Yeah, I think so, but I think also 20 to take into account that many parts of the rule have 21 pretty fairly extended compliance timelines, and so it's 22 not -- it's not like the rule will be final in 2022 and 23 everybody needs to be in compliance with everything at the 24 end of 2023. There are extended compliance timelines here 25 and so -- so, who knows where things will be in another

805 1 two or three years, let's say. 2 So the engines have -- is a big issue, obviously, 3 that has an extended compliance timeline; the pneumatics, 4 that has an extended compliance timeline. Some other 5 parts of the rule have extended compliance timelines as 6 well, so that just recognizing that you can't do 7 everything at once. It's not like you can switch a -- you 8 know, flip a switch and everybody goes from one thing to 9 another, and that there are supply chain issues, there's 10 technical expertise issues. 11 So that can be taken into account in trying to 12 estimate the total costs, which is I think another thing 13 about the -- I'm sorry, it goes back to the question of 14 how -- what sort of time frame are you looking at, and 15 that those costs are spread out over time and not 16 happening all at once. So by, you know, New Year's Eve 17 2023, everybody has to be in compliance, that's not the 18 case at all. 19 BOARD MEMBER HONKER: Understood. Thank you, 20 Mr. Palmer. That's -- those are the only questions I 21 have. 22 HEARING OFFICER ORTH: Thank you, Member Honker. 23 I have a question from the -- from the Chat from 24 Antoinette Reyes and then we'll go back to Madam Chair. 25 And I'm sorry, because of the platform, Mr. Palmer, it's	807 1 five-year period -- period. In the -- in -- in your, I 2 guess, comments regarding Mr. Dunham's estimate of that 3 five-year period, you had mentioned that you wanted to 4 take it out over greater than a five-year period of time. 5 And were you looking at 15, I think, is what was said 6 earlier; is that correct? 7 MS. DAY: Yes, it was. 8 MR. PALMER: Do you want me to handle this, 9 Susan? 10 MS. DAY: Yes, go ahead. 11 MR. PALMER: Okay. In estimating costs in our 12 federal regulatory programs, usually they use a 10- to 13 15-year time land -- timeline because the equipment is 14 usually quite durable, so the equipment will last 10 to 15 15, 20 years. And so you usually analyze those costs over 16 a reasonable economic life of the equipment. So you're 17 not -- you're not assuming that you -- that's the standard 18 practice for estimating equipment costs. 19 And Susan is an economist and she can explain 20 probably better the rationale for that, but it is standard 21 procedure to estimate costs over the lifetime of the 22 equipment, which is usually 10 to 20 years. And you can 23 sort of think about this a little bit in your own personal 24 life, in that, you know, very few people buy a car with 25 cash, for example, and that you're usually financing it,
806 1 not -- not possible for me to have asked the question 2 when -- when she was typing it in. But it was an earlier 3 question, it might have been during Member Garcia's 4 question, it might have been relevant then. 5 "Is it helpful to think about the fact that 6 natural gas wells are more common in the San Juan Basin, 7 whereas more oil wells are more common in the Permian 8 Basin? Is that helpful to any of your discussion here"? 9 MR. PALMER: It's something that we're certainly 10 aware of, and in some cases we estimated costs separately 11 for the San Juan versus the Permian; for example, for the 12 pneumatics. There are separate cost estimates for Permian 13 versus San Juan, so we're -- (unintelligible.) 14 HEARING OFFICER ORTH: Okay. Thank you. Would 15 you repeat that last bit? 16 MR. PALMER: I'm sorry. We're aware of those 17 differences. 18 HEARING OFFICER ORTH: Okay. Thank you. 19 And now Madam Chair, if you would. 20 CHAIRPERSON SUINA: Thank you, Madam Hearing 21 Officer. I have just a few more questions. So back to 22 the slides that were presented earlier, slide number 3 23 Mr. Dunham's estimate, and I apologize if we've already 24 addressed this or if you've already addressed this, but 25 we're looking at 3.8 billion in 2020 dollars over a	808 1 so... 2 But Susan can address that, the economics behind 3 that maybe a little better than I can, but that's just the 4 standard practice for estimating costs in federal 5 regulatory programs. 6 CHAIRPERSON SUINA: Ms. Day, do you have anything 7 to add to Mr. Palmer? 8 MS. DAY: Actually, in general, I think that 9 what -- the way that Brian just explained that is 10 appropriate. It's a -- the point is that the equipment 11 has a certain life, and in this case, that, we believe 12 that's, you know, 10 to 20 years, with an average of 15 13 years. And so, to -- to appropriately reflect the cost 14 that industry will incur on an annual basis -- an 15 annualized basis, you would calculate that value over a 16 longer time frame than five years. You'd calculate it 17 over more like 15 years. 18 CHAIRPERSON SUINA: And thank you for that. So 19 in this slide it says that it was ERG's estimate at 215 20 million per year over a period of five years, so if you 21 extend that period more than five years, would that mean 22 more cost, or would it be just the 1.1 billion annualized 23 over 15 years? 24 MS. DAY: Brian, the -- the 215 is per year? 25 MR. PALMER: Correct.

809 1 MS. DAY: And so the 1.1 is the annualized total 2 of over five years, and that was -- that estimate was 3 developed to compare to Mr. Dunham's five-year period? 4 MR. PALMER: That's -- that is correct, yes. 5 Right. So that is not the total -- that's not the total 6 capital costs of all the -- all of the rule, but that is 7 the annualized cost over five years. 8 CHAIRPERSON SUINA: Okay. So with the ERG model, 9 it would be more because you were looking at 15 years, 10 or -- or no? 11 MR. PALMER: It depends on what you're -- on 12 what -- hmm. 13 CHAIRPERSON SUINA: And I apologize, I'm just 14 trying to get my head around, so I can compare apples to 15 apples or oranges to oranges. 16 MR. PALMER: Yes, exactly right. 17 CHAIRPERSON SUINA: That's my only intent in 18 asking. 19 MR. PALMER: Yeah, and that's what -- and that 20 was our intent was that, you know, we -- because we were 21 presented with Mr. Dunham's cost estimate over five years, 22 we provided our cost estimate over five years. And, yeah, 23 so that's -- we were trying to present a five-year cost 24 estimate for the rule. 25 CHAIRPERSON SUINA: Okay. Okay. That	811 1 they won't have to do everything in the first year, and so 2 it doesn't seem correct to assume that the vast majority 3 of the costs will be incurred in that first year, when 4 they have -- industry has both the ability to phase-in 5 their compliance activities, and they have the ability to 6 finance what they're doing over a longer time frame. 7 CHAIRPERSON SUINA: Thank you, Ms. Day. I 8 appreciate that explanation. 9 Madam Hearing Officer, those are all my 10 questions. 11 HEARING OFFICER ORTH: All right. Thank you, 12 Madam Chair. Before we release the panel, Mr. Janoe has 13 changed his mind and would like to ask some questions. 14 Mr. Janoe, can you join us? There you are. 15 MR. JANOE: I am here, Madam Hearing Officer. 16 Thank you. These are directed to Mr. Palmer. 17 CROSS-EXAMINATION OF BRIAN PALMER 18 BY MR. JANOE: 19 Q. Mr. Palmer, you previously testified that you 20 have not provided testimony in connection with any oil and 21 gas rulemakings before, correct? 22 A. (Nodding head.) 23 Q. Okay. And you have no other experience in the 24 oil and gas field, do you, sir? 25 A. I worked on the greenhouse gas reporting program,
810 1 clarification is helpful. And I think in Mr. Dunham's 2 report -- and I'm trying to find it here, trying to scroll 3 through here -- there was a sentence saying the 3.8 4 billion cost would be -- I think 3.2 billion would be 5 realized within the first year, I think is what it said. 6 I'm trying to find that -- that sentence here. 7 Do you recall that in the report? 8 MS. DAY: Yes. 9 CHAIRPERSON SUINA: Can you explain what your 10 thoughts are regarding that sentence and having, you know, 11 the 3.8 billion, but then noting in his statement that 12 there's 3.2 billion that would be realized within the 13 first year? 14 MS. DAY: I'm not sure I understand your 15 question. 16 CHAIRPERSON SUINA: Maybe I should frame it this 17 way: Do you have an opinion over that -- with that 18 statement, that 3.2 billion would be the cost to industry 19 the very first year? 20 MS. DAY: Yes, and I think that's what I was -- 21 that's a part of what my testimony was trying to get at, 22 and also when I pointed out that Ms. Lackner from EDF, was 23 talking about the fact that there's a phase-in. And 24 Mr. Palmer also brought this up, that you don't have to -- 25 that industry will not have to incur all of the costs --	812 1 so Part W. 2 Q. Okay. But you have no experience in retrofitting 3 oilfield sites, do you, sir? 4 A. No, I am not an engineer. 5 Q. Okay. No experience on emission control 6 requirement, as opposed to say the greenhouse gas 7 reporting in the oilfield? 8 A. What is your question exactly? 9 Q. Sure. I just want to make sure, sir, you 10 mentioned that you had worked on the greenhouse gas 11 reporting rules in connection with the oil and gas 12 industry. I just want to make sure you haven't worked on 13 any prior work in which there were actual emission 14 controls being proposed in the oil and gas industry. 15 A. No, this is my first rule. 16 Q. Got it. And so you did not independently study 17 how long it will take industry to come into compliance 18 with these rules, did you? 19 A. That was not -- that was not a question we were 20 directed to ask; however, I'd like to point out that the 21 rule does include extended compliance timelines for -- 22 Q. Okay. But understanding that there are timelines 23 in the rules, sir, you have no opinion on how long it will 24 actually take for industry to meet those timelines, do 25 you, sir?

813 1 A. I will note that in their testimony in rebuttal, 2 that industry did recommend changes to the rule 3 specifically related to timelines, and that the rule, to 4 the best of my knowledge, has incorporated those timelines 5 in many cases. 6 Q. Okay. Mr. Palmer, my question was a little 7 simpler than that. You don't have an opinion on how long 8 it will actually take to retrofit these sites, do you, 9 sir? 10 A. No, I don't have an opinion on that. 11 Q. Are there any ten-year compliance deadlines in 12 the rule package, as it's presented right now? 13 A. I don't believe there are. 14 Q. Okay. Are there any 15-year timelines, sir? 15 A. No. 16 Q. How about 20-year timelines? 17 A. No. 18 MR. JANOE: Thank you. No further questions. 19 HEARING OFFICER ORTH: All right. Thank you, 20 Mr. Janoe. 21 Ms. Katz, does any of the questioning raise any 22 other need to do some redirect? 23 MS. KATZ: Yes, Madam Hearing Officer. I have a 24 few questions. 25 HEARING OFFICER ORTH: I'm sorry. I'm sorry to	815 1 VICE-CHAIR TRUJILLO-DAVIS: Okay. All right. 2 Thank you for clearing that up for me. I appreciate that. 3 MR. PALMER: Okay. 4 HEARING OFFICER ORTH: Okay. Thank you. 5 Ms. Katz, we're back to you. 6 MS. KATZ: Thank you, Madam Hearing Officer. 7 REDIRECT EXAMINATION OF BRIAN PALMER 8 BY MS. KATZ: 9 Q. Mr. Palmer, you were not the only person from ERG 10 that worked on this rulemaking; is that correct? 11 A. That is correct. 12 Q. And you had other colleagues from ERG who worked 13 extensively on this -- this regulation -- 14 A. That is correct. 15 Q. -- this cost system? 16 A. Yes. 17 Q. And can you -- can you discuss their background, 18 if any of them have background in oil and -- regulatory 19 efforts for the oil and gas industry, emissions controls, 20 and the -- the various types of areas that were identified 21 by Mr. Janoe just a moment ago? 22 A. Yes. Some of the staff members that have been 23 working on this project developing controlling cost 24 estimates, have specialized experience in developing 25 emissions inventories for oil and gas and also on both the
814 1 interrupt, Ms. Katz. Vice-Chair Trujillo-Davis has just 2 popped up in the Chat. Vice-Chair, there you are. 3 VICE-CHAIR TRUJILLO-DAVIS: Yes, thank you. 4 Mr. Palmer, I just wanted to follow up on a couple of 5 questions from a previous -- from previous questions. 6 With your time with the annualized costs, and you extended 7 it over 15 years, and there was another -- it was 8 mentioned several times about that maybe you will be able 9 to secure financing to spread that out. Wouldn't that 10 increase the estimated costs that was put into the report? 11 MR. PALMER: The -- when we annualize the costs, 12 we include an interest rate so they are -- that does 13 account for financing. 14 VICE-CHAIR TRUJILLO-DAVIS: Okay. So was that -- 15 and I'm sorry, I can't remember the exact number. It was 16 1.-something billion. Help me out here. 17 MR. PALMER: 1.1 billion. 18 VICE-CHAIR TRUJILLO-DAVIS: Yes. Thank you. 1.1 19 billion? 20 MR. PALMER: That was over five years. 21 VICE-CHAIR TRUJILLO-DAVIS: That's over five 22 years, okay. 23 MR. PALMER: No, that's the -- I'm sorry. It's 24 215 million is the annualized cost. That, over the first 25 five years, 5.5 times 215 million is 1.1 billion.	816 1 upstream side, and for Alaska, Texas, TCEQ. 2 We've also -- they've also been working on 3 developing EPA training in the oil and gas industry. Also 4 working on the North Slope for the Bureau of Ocean Energy 5 Management offshore and onshore, developing the federal 6 implementation plan for Indian Country in oil and gas. 7 Worked for Alaska Department of Environmental Conservation 8 on permitting in oil and gas, worked on the city of Fort 9 Worth study. Other folks who also have worked on Subpart 10 W as well. So as an institution organization, we do have 11 experience in the oil and gas industry as well. 12 Q. Thank you, Mr. Palmer. And I -- I will provide 13 resumes of other members of the ERG team. I will provide 14 exhibits for those. 15 Let me see. And you alluded to this, but 16 Mr. Janoe was asking you about the timelines for 17 compliance and whether you had any basis for those. Would 18 you agree that -- that the Department has adopted many of 19 the proposals from industry, including Oxy, on those types 20 of provisions? 21 A. Yes, that's correct. 22 Q. And would you -- would it be safe to assume that 23 industry proposing those would believe that they were 24 valid, and had the experience to -- to validate those that 25 they were proposing?

817 1 A. Yes. 2 Q. Okay. You stated that you relied on EPA's 3 estimates as the basis for the cost estimates for this 4 rule; is that correct? 5 A. Yes, that is true for many of them. 6 Q. And do those EPA estimates include administrative 7 costs, such as recordkeeping? 8 A. Very often it's a line item. 9 Q. So if owners and operators -- and Mr. Hiser asked 10 you about whether you evaluated additional administrative 11 costs from the annual compliance certification proposal. 12 A. Uh-huh. 13 Q. If owners and operators comply with the 14 recordkeeping requirements that are proposed in the rule, 15 would you expect additional resources to be needed to 16 conduct the annual compliance certifications? 17 A. If they're performing the recordkeeping and 18 reporting the recordkeeping that's required by the rule, 19 then the compliance certification should be very, very 20 minimal as an extra effort. 21 Q. Thank you. Would the -- and there was some 22 issues about looking at the five years versus the 15 23 years. Is the total capital cost the same whether you're 24 looking at five years or 15 years? 25 A. It's the same, yes.	819 1 Ms. Katz was, is the total compliance costs of the rule 2 the same as the five-year annualized cost. 3 MS. KATZ: That is not what I asked. 4 A. No. 5 Q. (BY MR. HISER) Okay. Then what was the 6 question, because maybe I misheard it. 7 MS. KATZ: The total capital costs. 8 Q. (BY MR. HISER) So, Mr. Palmer, do you agree that 9 the total capital cost is recaptured in the first five 10 years of the 15-year period that it appears you and 11 Ms. Day used? 12 A. I'm sorry. Can you please restate that? 13 Q. Do you believe -- 14 A. Just repeat it. 15 Q. Do you believe that the total capital cost is 16 recaptured in the five years of the 15-year period that 17 you and Ms. Day say you used? 18 A. What do you mean by "recaptured"? 19 Q. I believe -- and maybe Ms. Katz can clarify -- 20 that she was asking whether the total capital cost had 21 been incurred and paid for in those first five years. 22 A. No. She asked, is the total capital cost the 23 same whether it's spread out over five years or whether 24 it's spread out over 15 years. 25 Q. Oh, okay.
818 1 MS. KATZ: Okay. Thank you. That's all I have. 2 HEARING OFFICER ORTH: All right. Thank you very 3 much, Ms. Katz. If there's no reason not to excuse the 4 panel -- 5 MR. HISER: Sorry, Madam Chair -- Madam Hearing 6 Officer, there is reason not to excuse the witness. 7 HEARING OFFICER ORTH: Who is this? 8 MR. HISER: This is Eric Hiser, counsel for 9 NMOGA. 10 HEARING OFFICER ORTH: Yes. 11 MR. HISER: The last -- I -- I must take 12 exception to the last question and answer by Mr. Palmer, 13 because I think it's misleading and I think that we should 14 ask him to clarify exactly what he meant by it. 15 HEARING OFFICER ORTH: Okay. All right. 16 Mr. Palmer, do you have a clarification? We can't hear 17 you. 18 RE-CROSS-EXAMINATION OF BRIAN PALMER 19 BY MR. HISER: 20 Q. I'd be happy to explain to what my concern is 21 about that, if it would be helpful. 22 A. Yes, could you please? 23 HEARING OFFICER ORTH: Please go ahead, 24 Mr. Hiser. 25 Q. (BY MR. HISER) So the question that was asked by	820 1 A. The capital cost would be the same; you might 2 have a separate financing cost, but the capital cost is 3 the capital cost. 4 Q. But you've not ever said what you think the total 5 capital cost is over the 15-year period? 6 A. I have not presented that, no, and I am not 7 prepared to present that right now. 8 MR. HISER: I don't have any additional 9 questions, Madam Hearing Officer. 10 HEARING OFFICER ORTH: All right. Thank you, 11 Mr. Hiser. 12 Oh, Member Garcia, you have another question? 13 EXAMINATION OF BRIAN PALMER BY THE BOARD 14 BOARD MEMBER GARCIA: Yes. Thank you, Madam 15 Hearing Officer. One more question for Mr. Palmer that 16 came to mind is I -- I would anticipate that there's 17 always going to be discrepancies between industry cost 18 estimates and regulatory entity's cost estimates, that's 19 just the way it is. 20 Because you have so much experience in working 21 with rulemaking with EPA, for instance, are there efforts 22 to reconcile the differences that there are with industry, 23 in terms of how you look at the costs and they're so 24 different. Could you talk about that a little bit? 25 MR. PALMER: Let's see. I can talk about that a

821 1 little bit, yes. The EPA cost estimation that is used in 2 regulatory development, the EPA cost manual generally 3 recognizes that their estimates are within plus or minus 4 20 or 30 percent. Those methods are based on information 5 that they collect from industry and they are updated 6 periodically over time. 7 So EPA, for example, just updated their cost 8 methodology for thermal oxidizers. And it goes through -- 9 it's almost a regulatory development process, where they 10 propose a methodology and take public comments on it, so 11 that's what we rely on mostly. And so there is a 12 discrepancy between industry and regulatory agencies very 13 often. 14 And for example, the EPA is always trying to 15 update their methodology. So that's all I can -- I think 16 I can say about that. 17 BOARD MEMBER GARCIA: That's helpful. Thank you, 18 sir. That's all I have. Thank you, Madam Hearing 19 Officer. 20 HEARING OFFICER ORTH: Thank you, Member Garcia. 21 Is there any reason not to excuse the panel at this point, 22 Ms. Katz? No problem? 23 MS. KATZ: No, though they will stick around for 24 the surrebuttal. 25 HEARING OFFICER ORTH: I'm sorry, I didn't mean	823 1 MAUREEN LACKNER, 2 having been called, was examined and testified as 3 follows: 4 DIRECT EXAMINATION OF MAUREEN LACKNER 5 BY MS. PARANHOS: 6 Q. Maureen, if you could please state your full 7 name? 8 A. Maureen Lackner. 9 Q. And where are you employed? 10 A. I am an economic and policy manager in the Office 11 of the Chief Economist at Environmental Defense Fund. 12 Q. What is your educational background? 13 A. I earned a Master's in Public Policy from the 14 Gerald R. Ford School of Public Policy at the University 15 of Michigan in 2017. 16 Q. Thank you. And can you please give us an 17 overview of your work experience? 18 A. Sure. For the past four years I have provided 19 analysis on climate and environmental issues with the 20 special focus on methane emissions from the oil and gas 21 sector. My work on this issue includes economic analyses 22 on proposed regulations and policy design, as well as 23 modeling to track global policy ambitions and abatement 24 opportunities. 25 Q. And is EDF's Exhibit FFF an accurate copy of your
822 1 to excuse them entirely. All right. Thank you very much, 2 Mr. Palmer and Ms. Day. We'll get back to you as soon as 3 we can. 4 MR. PALMER: Thank you. 5 HEARING OFFICER ORTH: Are we hearing now from 6 Witness Lackner? Is that where we're going? 7 MS. KATZ: (Nodding head.) 8 HEARING OFFICER ORTH: Okay. Ms. Paranhos, I see 9 you on screen. And can we get -- did I make 10 Ms. Lackner -- I think I did, a panelist, right? 11 MS. PARANHOS: I don't see her at the moment. I 12 know she's been following this. 13 HEARING OFFICER ORTH: Tell me the first name. 14 I'm sorry, that's how they alphabetize this. 15 MS. PARANHOS: Sure. It's Maureen. 16 HEARING OFFICER ORTH: Maureen, yes. 17 MS. PARANHOS: She said she's on mute. 18 HEARING OFFICER ORTH: Okay. I'll make her a 19 panelist again. 20 MS. PARANHOS: Okay, great. 21 MS. LACKNER: Can you hear me? 22 HEARING OFFICER ORTH: Yes, and we can see you. 23 MS. LACKNER: Great. 24 HEARING OFFICER ORTH: Thank you. 25 MS. PARANHOS: Thank you so much.	824 1 CV? 2 A. Yes. 3 Q. And did you submit rebuttal testimony on behalf 4 of the EDF on this matter? 5 A. Correct. 6 Q. And is EDF Exhibit EEE an accurate version of 7 your rebuttal testimony? 8 A. Yes, it is. 9 Q. Do you have any corrections to your rebuttal 10 testimony? 11 A. No. 12 Q. And are EDF Exhibits GGG, III and HHH exhibits 13 you will be discussing today? 14 A. Yes. 15 Q. Thank you. 16 Ms. Lackner, can you please summarize the 17 opinions in your testimony? 18 A. Yes. First, the memo prepared by John Dunham for 19 the New Mexico Oil and Gas Association, the JDA analysis, 20 makes several assumptions that lead to an overestimate of 21 the additional operational costs imposed by the rules. 22 Second, as has already been discussed today, the 23 memo omits social costs imposed by the industry. EDF's 24 conservative estimate of the social costs from methane 25 emissions related to New Mexico's oil and gas production

825 1 amounts to roughly 1.6 billion dollars. EDF also 2 estimates volatile organic compounds emitted from oil and 3 gas facilities was 337,500 metric tons in 2019. Exposure 4 to these emissions are associated with health damages. 5 Third, the memo does not adequately explain 6 assumptions. I believe Ms. Day and Mr. Palmer also noted 7 this in their testimony. It also does not test the 8 strength of the assumptions in any kind of sensitivity 9 analysis used in the model. The lack of transparency in 10 the model calls into question the accuracy and reliability 11 of its conclusions. 12 Q. Thank you, Ms. Lackner. 13 And can you please discuss the assumptions made 14 in the Dunham memo that led to an overestimate of the 15 additional operational costs imposed by the proposed 16 rules? 17 A. Yes, happy to. Most of these have already been 18 covered, but happy to -- happy to go through my review. 19 So as I stated in my rebuttal testimony, there are at 20 least three assumptions that are not correct and lead to 21 an overestimate of compliance costs imposed by the draft 22 NMED rules. First, the analysis assumes that close to 23 82,000 wells will be impacted by the rule. But in 24 contrast, EDF estimates the NMED proposal would require 25 only a little over 49,000 wells to install controls. Our	827 1 However, this is not the case, as several components of 2 the rule allow for delayed compliance. 3 The main 2021 draft rule that was the subject of 4 the JDA analysis allowed for delayed implementation of a 5 number of provisions. Specifically, the main proposal 6 allowed operators up to seven years, so until January 1st 7 of 2029 to phase-in control requirements for existing 8 natural gas-fired spark ignition engines; two years from 9 the effective date of the rule to phase-in requirements 10 for existing compressors; two years from the effective 11 date of the rule to control existing glycol dehydrators; 12 one year to control existing heaters; one year to phase-in 13 requirements for new and existing hydrocarbon liquid 14 transfers; three years to control existing pneumatic 15 pumps; three years to control exiting storage tanks with 16 the potential to emit between 2 and 10 tons per year of 17 volatile organic compounds; one year to control existing 18 storage tanks with a potential to emit of greater than 10 19 tons per year of volatile organic compounds, and a 20 phase-in of over eight years to retrofit existing 21 pneumatic controllers. 22 So, in other words, operators do have flexibility 23 in a number of these points in terms of how they invest 24 over a period of years. 25 Finally, the analysis does not factor in the
826 1 estimate is based on the 54,000 active wells with 2 production in 2019. And I believe this is pretty close to 3 the estimate that Mr. Powell submitted earlier today. 4 In addition to limiting our count to active 5 wells, the lower number also reflects that not all 6 counties are covered by the rule, and about 4,500 wells 7 within these impacted counties would be exempt from many 8 of the control requirements in the rules pursuant to the 9 small business exemption. 10 Assuming the added administrative and operational 11 costs per oil and gas well listed in the JDA analysis are 12 correct, decreasing just the number of wells -- of oil and 13 gas wells covered by the rules resulted in an adjusted 14 cost to the industry of about 1.8 billion in the first 15 year. This is 43 percent lower than the figure reported 16 in the JDA analysis. 17 Again, as has been noted several times, this 18 estimate may also be incorrect. The cost data are not 19 documented and -- and we've already covered this, the 20 costs are based on undisclosed result from just ten 21 companies. 22 A second assumption that we believe incorrectly 23 increases the overall costs, is that operators will invest 24 in every requirement under the rule within the first year. 25 Ms. Day and Mr. Palmer also noted this in their testimony.	828 1 additional revenues producers could realize from captured 2 gas. EDF estimates that New Mexico producers waste about 3 300 million dollars worth of natural gas per year. This 4 is based on an assumption of \$4 per thousand cubic feet of 5 natural gas, and that natural gas is 80 percent methane. 6 And EDF estimates that oil and gas facilities were 7 responsible for over 1 million metric tons of methane 8 emissions in 2019. Investment in equipment that reduces 9 these emissions could result in meaningful savings to 10 industry. 11 Q. Thank you, Ms. Lackner. 12 And can you explain what the social costs imposed 13 by pollution emitted from oil and gas operations are? 14 A. Yes. Happy to. Social costs include climate 15 damages from greenhouse gas emissions, such as CO2 when 16 oil and gas are combusted, and climate damages from 17 methane emissions that occur throughout the oil and gas 18 supply chain. And so, again, using a conservative 19 estimate of methane climate damages, the social cost from 20 methane emissions related to New Mexico oil and gas 21 production, amounts to roughly 1.6 billion dollars. 22 I'll also note that social costs don't -- are not 23 just limited to climate damages. Social costs also 24 include costs to the people of New Mexico who would be 25 exposed to unhealthy air as a result of oil and gas

829 1 activities. And the analysis should account for local 2 environmental damages incurred in New Mexico through 3 degraded air quality and related health impacts associated 4 with VOC emissions. 5 EDF -- again I'll note that EDF estimates these 6 emissions were over 300,000 metric tons in 2019. 7 Q. Thank you. Did the Dunham memo account for 8 climate damages and local environmental damages caused by 9 pollution emitted by oil and gas operations? 10 A. No, it did not. 11 Q. Thank you. And do you have any other concerns 12 with the model used by Mr. Dunham? 13 A. Yes. As I indicated in my rebuttal testimony, 14 the Dunham report estimates the indirect and induced 15 economic impacts of the rule based on a model developed 16 for Western Energy Alliance. The study does not 17 adequately explain its underlying assumptions or test the 18 strength of these assumptions in a sensitivity -- any kind 19 of sensitivity analysis. 20 One assumption that appears to be in place is 21 that the rule will not create any jobs; however, this is 22 likely incorrect. Research prepared by data research on 23 behalf of EDF finds that methane mitigation -- the methane 24 mitigations industry is a young, but fast growing source 25 of high quality jobs across the country. These companies	831 1 Fox and I represent a number of groups here today at the 2 proceeding. I just have a few questions for you. From -- 3 from your testimony, I take it, that you have reviewed 4 Brandon Piles -- Powell's rebuttal testimony provided on 5 behalf of NMED in Rebuttal Exhibit 17; is that correct? 6 A. Yes, that's correct. 7 Q. Can you summarize what Mr. Powell said about the 8 number of wells in New Mexico that will be subject to 9 NMED's rule? 10 A. Yes. Mr. Powell states that there are currently 11 about 53,000 active wells in -- active oil and gas wells 12 in the state; 26,800 of these are active oil wells and 13 about 26,500 are active gas wells. These figures are 14 based on the Oil Conservation Division's own records. 15 Q. Approximately, how many of those wells would be 16 subject to the EIB rule passed in this proceeding? 17 A. My understanding is that those -- the rule would 18 impact most of those active wells. 19 Q. And how does Mr. Powell's estimate compare with 20 the number of wells estimated in the Dunham report, that 21 would be impacted by the EIB's rule? 22 A. Yeah, the Dunham report states that the total 23 number of impacted wells about 82,000, so this is quite a 24 bit lower. 25 Q. And so, what kind of impact would OCD's -- would
830 1 anticipate hiring more employees if additional methane 2 regulations are put in place at the state or federal 3 level. 4 And based on this research report and my opinion, 5 the Dunham report overestimates job losses that could stem 6 from the implementation of the NMED rules. 7 Q. Thank you, Ms. Lackner. 8 And did you review the rebuttal testimony 9 submitted by Ms. Day and Mr. Palmer? 10 A. Yes. 11 Q. And do you agree with the opinions provided by 12 Ms. Day and Mr. Palmer with respect to the weight that 13 this Board should give the Dunham analysis? 14 A. Yes, I agree and also urge the Board to give the 15 Dunham report no weight. 16 Q. Thank you very much for your testimony, 17 Ms. Lackner. I have no further questions. 18 HEARING OFFICER ORTH: Thank you, Ms. Paranhos. 19 Ms. Katz, do you have questions of Ms. Lackner? 20 MS. KATZ: No questions. 21 HEARING OFFICER ORTH: Thank you, Ms. Fox? 22 MS. FOX: Just a couple, Madam Hearing Officer. 23 CROSS-EXAMINATION OF MAUREEN LACKNER 24 BY MS. FOX: 25 Q. Good afternoon, Ms. Lackner. My name is Tannis	832 1 using OCD's estimate of well count have on the Dunham 2 report, if the OCD well count were used? 3 A. As I -- as I stated in my testimony, simply 4 decreasing the total well count will decrease the 5 aggregate cost to the industry. 6 Q. Thank you. That's all I have. 7 HEARING OFFICER ORTH: Thank you. Mr. Jaynes, do 8 you have any questions of Ms. Lackner? 9 MR. JAYNES: No questions at this time, Madam 10 Hearing Officer. 11 HEARING OFFICER ORTH: Thank you. Lisa Devore 12 may not be with us. Mr. Nykiel? 13 MR. NYKIEL: No questions. Thank you. 14 HEARING OFFICER ORTH: Thank you. Mr. de 15 Saillan? 16 MR. DE SAILLAN: No questions. Thank you and 17 thank the witness for her testimony. 18 HEARING OFFICER ORTH: Thank you. Mr. Hiser? 19 MR. HISER: Madam Hearing Officer, I would have a 20 few -- just, I think, two questions for Ms. Lackner. 21 CROSS-EXAMINATION OF MAUREEN LACKNER 22 BY MR. HISER: 23 Q. Ms. Lackner, my name is Eric Hiser; I represent 24 the New Mexico Oil and Gas Association. Appreciate your 25 testimony. You made a discussion in your testimony about

833 1 the fact that the rule currently provides a number of 2 compliance time frames, generally ranging from two to 3 three years, with longer time frames, I think, for 4 pneumatics and engines and turbines. 5 Don't all of those extended compliance time 6 frames come from the 9/7 or 9/16 draft of the rule; 7 whereas, Mr. Dunham's report was based on the May rule, 8 which did not have those time frames? 9 A. No, I believe they did come from the May -- the 10 May draft. I -- I checked that. 11 Q. You did. All right. 12 And do you agree that regardless of whether we 13 pay for it over a one-year, five-year, or fifteen-year 14 time frame, that, ultimately, the costs of the rule has to 15 be paid for, it's just a matter of perhaps of some 16 discount rate? 17 A. Well, so, starting from the assumption that the 18 costs are accurate, which is difficult to verify, yes, if 19 you -- if you have a longer time frame, it's the same cost 20 spread out over a longer -- over a longer time, but that 21 could make a big difference in terms of, you know, how you 22 offset those costs with your ongoing revenue and things 23 like that. 24 Q. Thank you, Ms. Lackner. No further questions. 25 HEARING OFFICER ORTH: Thank you, Mr. Hiser.	835 1 much, Mr. Rose. 2 Mr. Janoe, do you have questions of Ms. Lackner? 3 MR. JANOE: No questions, Madam Hearing Officer. 4 HEARING OFFICER ORTH: All right. Mr. Butzier? 5 MR. BUTZIER: No questions. Thank you. 6 HEARING OFFICER ORTH: Thank you. Ms. Gutierrez? 7 MS. GUTIERREZ: No questions. 8 HEARING OFFICER ORTH: Thank you. 9 Mr. Colclasure? 10 MR. COLCLASURE: No questions, Madam Hearing 11 Officer. 12 HEARING OFFICER ORTH: Thank you. And 13 Ms. Witherspoon? 14 MS. WITHERSPOON: No questions. Thank you. 15 HEARING OFFICER ORTH: Thank you. I'm going to 16 turn to the Board members now for their questions. In the 17 event you are an attendee and would want to pose a 18 question to Ms. Lackner, please reach out through the 19 Chat. 20 Madam Chair, do you have questions of 21 Ms. Lackner? 22 EXAMINATION OF MAUREEN LACKNER BY THE BOARD 23 CHAIRPERSON SUINA: Thank you, Madam Hearing 24 Officer, I do. Good afternoon, Ms. Lackner. Appreciate 25 your time and your analysis and everything you've shared
834 1 Mr. Rose, do you have questions of Ms. Lackner? 2 MR. ROSE: Madam Hearing Officer, I noted that 3 in -- earlier, that I had raised objections to the number 4 of the exhibits that Ms. Lackner referred to, as well as 5 portions of her prefiled written testimony. I noticed 6 that there was no offer for admission of those exhibits. 7 I was wondering if we should take that up now, whether we 8 should do that at some later date, subject to my objection 9 or however you wanted to deal with that. 10 We could certainly do that now, but -- and I 11 didn't know, for example, if Ms. Day is going to be 12 available much longer, if Ms. Katz has it. 13 HEARING OFFICER ORTH: Right. So I understand -- 14 my understanding from our discussion yesterday was that in 15 order to be most humane to Ms. Day, we were going to take 16 up the discussion of exhibits after -- after this topic 17 and the next topic. 18 MR. ROSE: I just wanted to make it clear for the 19 record, Madam Hearing Officer, that we still have those 20 objections to those exhibits. 21 HEARING OFFICER ORTH: Yes. Thank you for 22 putting that on the record. That's perfectly fine. 23 MR. ROSE: Otherwise, I have no questions of this 24 witness, Madam Hearing Officer. 25 HEARING OFFICER ORTH: Okay. Thank you very	836 1 with the Board today. So I wanted to go back to, I think, 2 a statement you made about the social costs of oil and gas 3 and also the methane. 4 For this effort, did you provide or did you do an 5 analysis of what those social costs are? 6 MS. LACKNER: So, yes, I did. I used the current 7 federal estimate of the social costs of methane and 8 applied it to EDF's estimate of methane emissions from oil 9 and gas production in New Mexico for 2019. 10 CHAIRPERSON SUINA: Can you just remind me what 11 that cost -- what your estimate was? 12 MS. LACKNER: It was about 1.6 billion. 13 CHAIRPERSON SUINA: Okay. And then -- and that 14 cost, was that using -- when was that analysis done, I 15 should ask. 16 MS. LACKNER: So the social cost of methane was 17 updated in, I believe -- well, the spring of 2021 by the 18 interagency working group on the social cost of greenhouse 19 gas emission to reflect just -- it's a -- it's an interim 20 number that reflects inflation since the original analysis 21 was conducted in 2016 or 2017, I believe. 22 CHAIRPERSON SUINA: And I just want to make sure 23 I'm clear; and was that done just for New Mexico? 24 MS. LACKNER: Oh, so the social cost of methane 25 is the math that we rely on at EDF, was a number estimated

837 1 for -- it's a global number that reflects global climate 2 damages. 3 CHAIRPERSON SUINA: Thank you for that 4 clarification. I just wanted to make sure I'm doing 5 apples to apples. I'm trying -- trying with so much data 6 and assumptions here. So has there been an analysis done 7 just specifically for New Mexico? 8 MS. LACKNER: So, for climate damages, since the 9 damages are global and it's difficult to pinpoint how -- 10 how those damages are impacting people on a local level, 11 we tend to use just a global number. For the VOC damages 12 that I noted, those would be local, although, I don't 13 provide an estimate of the magnitude of those damages in 14 my analysis. 15 CHAIRPERSON SUINA: Okay. Thank you for that, 16 Ms. Lackner. And then I just want to make sure I clarify; 17 so some of your analysis is only -- I think one of your 18 numbers about, you know, trying to calculate apples to 19 apples here with Mr. Dunham's analysis, and you're looking 20 at Mr. Dunham's analysis, and can you remind me what your 21 estimate is for the cost to industry as a result of 22 this -- of these rules? 23 MS. LACKNER: Yeah. Happy to. I did not provide 24 my own estimate. I did note that if you simply reduce the 25 number of wells, the aggregate cost to industry is quite a	839 1 measures would decrease methane emissions, which would 2 increase revenue for those oil and gas facilities. 3 BOARD MEMBER CATES: Yeah, that's all I had. 4 That's what I thought you said, so I just wanted to make 5 sure. Thanks very much. 6 MS. LACKNER: Uh-huh. 7 HEARING OFFICER ORTH: Member Bitzer? 8 BOARD MEMBER BITZER: Do you have any -- thank 9 you, by the way, for your testimony. Did you have a job 10 loss estimate of your own since Dunham's data seems a bit 11 high? 12 MS. LACKNER: No, that is not something I looked 13 at. 14 BOARD MEMBER BITZER: That was my only question, 15 Madam Hearing Officer. 16 HEARING OFFICER ORTH: Thank you. Member -- or 17 do we have Member Duval? I don't think so. Member 18 Garcia? 19 BOARD MEMBER GARCIA: No questions. Thank you, 20 ma'am. 21 HEARING OFFICER ORTH: Thank you. Member Honker? 22 BOARD MEMBER HONKER: No questions. Thank you. 23 HEARING OFFICER ORTH: Thank you. Let's see. 24 Ms. Paranhos, will there be any redirect? 25 MS. PARANHOS: No need for redirect or
838 1 bit lower. But, again, as others have testified, this 2 doesn't address the per well cost amounts that are also -- 3 I have some questions about those as well. 4 CHAIRPERSON SUINA: Okay. Thank you, 5 Ms. Lackner. Appreciate your time. That's all for now, 6 Madam Hearing Officer. 7 HEARING OFFICER ORTH: Thank you, Madam Chair. 8 Vice-Chair Trujillo-Davis, do you have questions? 9 VICE-CHAIR TRUJILLO-DAVIS: I do not at this 10 time. Thank you, Ms. Lackner, for your testimony. 11 HEARING OFFICER ORTH: Thank you. Member Cates? 12 BOARD MEMBER CATES: Yeah, one quick question 13 here. It's kind of a broad question, and thank you for 14 testifying, Ms. Lackner. So did I hear you say something 15 along the lines of one way to look at this is not as a 16 cost, but perhaps as a capital investment? Did you go 17 there? Did I hear you say something like that? 18 MS. LACKNER: I'm not -- I'm not sure. 19 BOARD MEMBER CATES: Did your work look at the, 20 you know, the waste associated with leaky infrastructure 21 across the Permian and whether there was any cost -- 22 whether there's any, you know, capital payback from, you 23 know, repairing this leaky system? 24 MS. LACKNER: Yes. Yes, thank you for 25 clarifying. Yes, I noted that some of these control	840 1 surrebuttal. Thank you, Madam Hearing Officer. 2 HEARING OFFICER ORTH: All right. Well, thank 3 you and thank you very much, Ms. Lackner, for your 4 testimony. I think we need a break. Shall we break until 5 3. Terrific. See you then. 6 (Recess taken from 2:42 p.m. to 3:00 p.m.) 7 HEARING OFFICER ORTH: Let's come back from the 8 break, please. Ms. Katz, if you would please, I believe 9 we're moving to the next topic. 10 MS. KATZ: Madam Hearing Officer, I believe 11 Mr. Hiser said that Mr. Dunham would have some 12 surrebuttal. 13 HEARING OFFICER ORTH: That's right. I'm sorry, 14 Mr. Hiser, for forgetting. 15 MR. HISER: That's okay. It's been going on for 16 a while. 17 HEARING OFFICER ORTH: Is this -- is this a good 18 time then for Mr. Dunham? 19 MR. HISER: Yes, I think Mr. Dunham should still 20 be with us. 21 MR. DUNHAM: Yes, and I hope I have a better 22 microphone now. 23 HEARING OFFICER ORTH: It seems a little clearer, 24 keep your voice up though. 25 MR. DUNHAM: I will. I will keep it up, yes.

841 1 HEARING OFFICER ORTH: Thank you. Mr. Hiser? 2 MR. HISER: Thank you, Madam Hearing Officer. 3 SURREBUTTAL DIRECT EXAMINATION OF JOHN R. DUNHAM 4 BY MR. HISER: 5 Q. Mr. Dunham, welcome back for your surrebuttal. 6 Just a reminder that you remain under oath in regard to 7 this testimony. Did you hear the testimony of Ms. Day and 8 Mr. Palmer? 9 A. Yes, sir, I did. 10 Q. And did you hear their discussion of the 11 annualized cost of 215 million dollars per year? 12 A. Yes, I did. 13 Q. And is it your understanding that that would be 14 the cost basically over -- if you were to take the capital 15 costs and divide it over 15 years, instead of a shorter 16 period? 17 A. I'm actually somewhat confused by what they were 18 presenting. At one point they said the cost was 1.7 19 billion, and at one point they said 1.1 billion. If I 20 take the 210 million, you know, and take it across 15 21 years, that's 3.2 billion -- (unintelligible.) 22 HEARING OFFICER ORTH: Mr. Dunham, I'm sorry. 23 Hold on. Mr. Dunham, I'm sorry. I think the court 24 reporter was able to capture very little of that. 25 COURT REPORTER: Right.	843 1 CHAIRPERSON SUINA: Madam Hearing Officer, I just 2 want to ask a quick question: were those slides also 3 distributed? 4 HEARING OFFICER ORTH: Again, we got a number of 5 slide presentations last night sent to us via email. Pam, 6 I suspect would have forwarded that to you. 7 If she did not -- Pam, will you confirm that you 8 either forwarded it to the Board or do that now? She may 9 have stepped away. Can I just ask, Madam Chair, did you 10 get any email slide presentations last night? 11 CHAIRPERSON SUINA: No, we didn't. And so that's 12 why I was just asking, just so I can confirm that the 13 Board and my fellow Board members have access to that as 14 well. 15 HEARING OFFICER ORTH: Okay. So I will forward 16 those to you. 17 MR. HISER: We will be happy to wait, Madam 18 Hearing Officer, until you can get that sent. 19 HEARING OFFICER ORTH: Okay. Hold on just a 20 second. 21 MS. KATZ: Mr. Hiser, was that -- was this 22 PowerPoint -- was the slide included in the same Dunham 23 summary of testimony? 24 MR. HISER: It is. It's the part back of that 25 testimony.
842 1 MR. DUNHAM: I'll try to slow down. 2 COURT REPORTER: Listen, Mr. Dunham. I need you 3 to look up when you speak. Part of mine, I read lips. I 4 need you to slow down, please. 5 MR. DUNHAM: Okay. 6 COURT REPORTER: So please don't go so quickly. 7 A. All right. The answer to the question was I'm 8 not sure. There were a number of different cost figures 9 discussed. One was 1.7 billion, one was 1.1 billion, and 10 then there was a discussion of, I think it was 210 million 11 per year over 15 years, or maybe five -- I'm not actually 12 sure what the cost number is. 13 Q. (BY MR. HISER) And did you estimate if you took 14 the 15 years times the 210 million, what type of number 15 would that give? 16 A. It comes up to 3.2 billion in nominal dollars. 17 Q. Okay. And did you prepare some surrebuttal 18 testimony in response to the written rebuttal testimony of 19 Mr. Palmer, Mr. Powell and Ms. Day? 20 A. Yes, sir, I did. 21 Q. And did you prepare some slides to help walk us 22 through that surrebuttal testimony? 23 A. I do have some slides if I could make the sharing 24 thing work. 25 Q. Okay. Let the Hearing Officer re-enable you.	844 1 MS. KATZ: Okay. Thank you. 2 MR. HISER: So, Madam Hearing Officer and other 3 Board members, it will be in the Dunham PowerPoint, and it 4 will be starting at the slide called surrebuttal, which 5 I'm not quite -- looking at the thing it says it's slide 6 seven in that packet. 7 BOARD MEMBER HONKER: I believe we -- we do have 8 that slide packet. 9 MR. HISER: Great. 10 BOARD MEMBER HONKER: Pam sent it around earlier 11 today. 12 MR. HISER: Okay. Thank you, Member Honker. 13 Ms. Orth? 14 HEARING OFFICER ORTH: I don't have to send it 15 then unless -- can you find it, Madam Chair? I believe it 16 was originally sent by Brandon Curtis. 17 CHAIRPERSON SUINA: Yes. Yes, we got it earlier 18 today. 19 HEARING OFFICER ORTH: Okay. Great. 20 CHAIRPERSON SUINA: Thank you. 21 HEARING OFFICER ORTH: Go ahead, Mr. Hiser. 22 Q. (BY MR. HISER) So, Mr. Dunham, did you prepare 23 some responses to the questions and concerns that were 24 raised by Mr. Powell, Mr. Palmer and Ms. Day? 25 A. Yes, sir, I did.

845 1 Q. Would you like to walk us through your response 2 to some of those concerns? 3 A. Of course. Just in summary in general, there 4 were three concerns with the work that we conducted. The 5 first was that our well count number was -- was not 6 correct, which I take full responsibility for. I looked 7 over the data and I definitely interpreted it incorrectly. 8 The second was that our cost numbers were way 9 too -- were high, and the third was the timing that we 10 used to -- to put to the numbers. 11 HEARING OFFICER: I'm sorry. Mr. Dunham? 12 MR. DUNHAM: Yes, ma'am. 13 HEARING OFFICER ORTH: Mr. Dunham, your voice has 14 gotten very muddy again and I think you are speaking a 15 little too fast. 16 MR. DUNHAM: I'm sorry. Is this better? 17 COURT REPORTER: Wait. Is it possible for you to 18 call in on the phone? Would that be okay? 19 MR. DUNHAM: Would somebody give me the -- is it 20 on the same sheet? 21 MR. HISER: I believe, Mr. Dunham, that according 22 to Vice-Chair Trujillo-Davis, if you go to the three 23 little dots, it may give you -- under "switch audio" an 24 option to have a phone number call or a number to call. 25 MR. DUNHAM: Let me see. (Unintelligible.)	847 1 back at the data, and that is my mistake. 2 The second was that we used a five-year cost -- a 3 five-year period for our net present value rather than a 4 15-year period, which the reason EPA uses that is because 5 that's outlined in the B-O-M-B circular on regulatory 6 impact analysis. We use five because that's when most of 7 the operational production of most oil and gas wells 8 occurs. 9 And then the third was that we had actual cost 10 numbers that were not correct. So I reran the analysis 11 using the 47,937 oil and natural gas wells that were in 12 Exhibit 19 on page 3. I believe that was -- that was 13 ERG's number, though it's close to what Mr. Powell was 14 discussing. 15 I then used an overall cost number of 1.7 16 billion; I understand now it might be 1.1, it might be -- 17 I used 1.7. And I ran the same exact model and I came up 18 with a very different loss number, obviously, because all 19 model are based on assumptions. So we -- the new loss 20 number would be about 41 percent of currently operating 21 oil and natural gas wells would become unproductive under 22 those assumptions, and the other assumptions in the model 23 would result in a reduction of about 7 percent of oil 24 production and about 13 percent of natural gas production 25 in the state, which would represent about a 9.5 reduction
846 1 MR. HISER: So on my screen it's right next to 2 the red X that would take you out of the platform. 3 MR. DUNHAM: Got it. 4 MR. HISER: Okay. 5 MR. DUNHAM: I'm terribly sorry. That's an 6 option that I have to stop sharing the screen, I think. 7 Okay. I'm looking for three dots. Yes. Switch audio? 8 MR. HISER: Yes. 9 MR. DUNHAM: Oh. Got it. I will be right back. 10 MR. HISER: Go ahead and leave your computer on 11 because we'll still want to see your slides. 12 MR. DUNHAM: Am I here? 13 MR. HISER: Yes. 14 MR. DUNHAM: Okay. I hope you can hear me now. 15 MR. HISER: Yes, the court reporter has her 16 thumbs up. 17 Q. (BY MR. HISER) And so if you could put your 18 slide deck back on the screen, we will be ready to go. 19 A. I'm terribly sorry about that. Okay. 20 Q. Since you had responded that there were three 21 concerns that you had seen expressed, and you were walking 22 us through your response. 23 A. Correct. The first was -- the first concern was 24 that the number of operational wells that we included in 25 the model was incorrect, and that is actually -- I looked	848 1 in production in value terms. And that would have still a 2 pretty significant economic cost on the state. 3 There would be about 2000 jobs lost, about 423 4 million in reduced economic activity in the state, and a 5 loss of state and local taxes of about 14.3 million a 6 year, again, not including the -- the royalty payments. 7 And if I can get this to work. So just in 8 general, just in response, the complaints that were made 9 of my analysis, which I very much appreciate, it's -- it 10 is difficult to -- to analyze something when you don't 11 have the models in front of you. But my analysis relied 12 solely on cost data provided by actual oil and natural gas 13 companies via the New Mexico Oil and Gas Association. 14 I believe other witnesses have testified or will 15 testify about that the ERG and NMED cost estimates may not 16 be accurate. I'm not going to -- I can't tell you either 17 way, I'm not an engineer. But even using the well data 18 and cost numbers that were in the testimony, the impact is 19 still quite significant and the rule will cost somewhere 20 between 1.1 and maybe 3.2 billion dollars. 21 The models that we use are very standard models. 22 The cost models are all developed based on IMLANs, 23 input/output model which is widely used. It's how you 24 develop production functions. I've been doing this for 30 25 years, it's how this is done. And all of -- all of my

849 1 data, all of my models are open architecture. Nobody 2 called me and asked me about any of these assumptions or 3 where the data came from, but it is -- I'm more than happy 4 to answer questions about that. So that's the sum of 5 my -- of my surrebuttal -- of my surrebuttal testimony. 6 Q. So, basically, in summary, you took the model, 7 you took the revised well counts that were provided by the 8 ERG folks in their rebuttal and you placed it in their 9 model and then based on that, this would be the new 10 calculation that you have on the slide just before this? 11 A. That would be -- yeah, these numbers on this -- 12 on this slide here. 13 Q. Okay. Thank you, Mr. Dunham. 14 MR. HISER: I guess, Madam Hearing Officer, I 15 think it might be useful -- he talked through all of 16 these, but it might be useful to make this -- mark this as 17 NMOGA Exhibit 57 just so that the Board would have it in 18 tabular format rather than having to try read through it 19 in testimony. 20 HEARING OFFICER ORTH: All right. Thank you. 21 Let me pause for a moment in the event that are objections 22 to admitting this as Exhibit 57. Hearing no objections, 23 Exhibit 57 is admitted. Thank you, Mr. Hiser. 24 (NMOGA Exhibit 57 received into evidence at this 25 time.)	851 1 HEARING OFFICER ORTH: All right. Thank you, 2 Mr. Hiser. 3 Ms. Katz, do you have questions of Mr. Dunham? 4 MR. DUNHAM: Can I stop sharing the screen now? 5 HEARING OFFICER ORTH: Well, let me ask Ms. Katz. 6 Will you be referring to the slides? 7 MS. KATZ: No, I will not. 8 HEARING OFFICER ORTH: All right. It seems to me 9 we could -- there you go. Thank you. Go ahead, Ms. Katz. 10 MS. KATZ: Thank you. 11 SURREBUTTAL CROSS-EXAMINATION OF JOHN R. DUNHAM 12 BY MS. KATZ: 13 Q. Thank you, Mr. Dunham. I just have one question. 14 Are you aware that the New Mexico Air Quality Control Act 15 does not require the Department to do a regulatory impact 16 analysis for a rulemaking under the provisions regarding 17 ozone control? 18 A. Yeah, as I said, I'm not -- I'm not sure about 19 New Mexico's rules, but the federal government would have 20 to do one for this, but I'm not sure about any individual 21 state. 22 MS. KATZ: Thank you, Mr. Dunham. That's all I 23 have. 24 HEARING OFFICER ORTH: Thank you. Ms. Fox, do 25 you have questions?
850 1 Q. (BY MR. HISER) I'm reminded that I had one more 2 question. So, Mr. Dunham, there was some discussion 3 earlier about doing a larger cost/benefit analysis that 4 looked at the broader implications of a rule like this 5 from a societal basis. Did you refer to that as more like 6 a regulatory impact analysis? 7 A. That would be a regulatory impact analysis. 8 For -- for large federal rules those are required by the 9 Office of Management and Budget and there's a -- there's a 10 whole format on how those should be conducted, the kinds 11 of assumptions that are used, what needs to be presented. 12 And a lot of what was being discussed in the rebuttal -- 13 in the earlier testimony had to do with doing a regulatory 14 impact analysis. 15 Q. Right. And in your experience, is that typically 16 done by the regulated industry or is that usually done by 17 the governmental agency proposing the rule? 18 A. The federal government requires it. I'm not 19 honestly sure about New Mexico's requirements, but it's 20 usually done -- it would be done by those proposing the 21 rule. 22 Q. Okay. Thank you. 23 MR. HISER: That does complete my testimony now, 24 Madam Hearing Officer -- or our testimony of Mr. Dunham 25 today.	852 1 MS. FOX: Thank you, Madam Hearing Officer. I 2 have a couple. 3 SURREBUTTAL CROSS-EXAMINATION OF JOHN R. DUNHAM 4 BY MS. FOX: 5 Q. Hello, Mr. Dunham. My name is Tannis Fox; I 6 represent a number of organizations in this proceeding. 7 And I was wondering if you could put up the slides that 8 you just had up, please? 9 A. I can do that, I believe. This one? 10 Q. Yes, thank you very much. First, I'd like to ask 11 you accept as accurate Mr. Powell's well count number of 12 approximately 47 or 48,000 wells that this -- 13 A. I would agree. 14 Q. -- that the EIB's rule would apply to? 15 A. Yes. Yes, ma'am, I think Mr. Powell would be the 16 expert on -- on that particular count. 17 Q. And then, did you -- based on that new well 18 count, did you redo your total cost number from Table 1, 19 which you estimated the total cost for the EIB rule would 20 be 3.8 billion? 21 A. Not -- not for this particular surrebuttal. 22 It's -- I could -- I could do that. I used the 1.7 23 billion which was the number in the other -- in the ERG's 24 testimony. 25 Q. So you're accepting as more accurate, ERG's

853 1 initial estimate of 1.7 billion dollars before they 2 recalculated based on amendments they're now proposing? 3 A. I have no idea if their number is accurate or 4 not, ma'am. I have not seen their -- any of their work. 5 Q. I thought you just said that you're relying upon 6 ERG's 1.7 billion dollar estimate? 7 A. That was in the -- in the rebuttal testimony, to 8 prepare this particular slide and this particular 9 analysis, I relied on that number, though they -- through 10 they said today that that was not a correct number. 11 Q. Right. You understood their testimony that they 12 had recalculated that initial number based on amendments 13 that they proposed, since they -- since their initial 14 direct filing? 15 A. Yeah. Yes, that's what they said. 16 Q. Okay. So -- so you're relying on the 1.7 billion 17 number, but you don't -- you're not saying that that 18 number is accurate; is that -- is that what you're saying? 19 A. Correct. I have no idea if that number is 20 accurate or not. 21 Q. So, then, based on the new well count that you 22 have testified is more accurate or is accurate, you have 23 not updated your initial costs of 3.8 billion dollars; is 24 that correct? 25 A. No, ma'am.	855 1 A. Did I include any -- any revenue estimates, 2 you're saying, from that -- from that gas? 3 Q. Correct. Any of that natural gas -- 4 A. No, I did not look at that. No. 5 Q. Thank you. Sorry to talk over you. I think you 6 said "no." Thank you. 7 A. I said no. I'm sorry. 8 HEARING OFFICER ORTH: Thank you. Mr. Jaynes? 9 MR. JAYNES: No questions, Madam Hearing Officer. 10 HEARING OFFICER ORTH: Thank you. Ms. Devore? 11 Mr. Nykiel? 12 MR. NYKIEL: Yes, I just have a few questions, 13 Madam Hearing Officer. 14 SURREBUTTAL CROSS-EXAMINATION OF JOHN R. DUNHAM 15 BY MR. NYKIEL: 16 Q. Mr. Dunham, my name's Matt Nykiel, I'm here on 17 behalf of WildEarth Guardians. I just want to clarify a 18 couple of things; I might have the wrong understanding. 19 But you did admit that you made a mistake in the number of 20 wells you used as an input that would be subject to the 21 rule when you ran your model initially; is that right? 22 A. That is correct. 23 Q. Okay. And the surrebuttal testimony that you 24 have up on the screen today, that was shared to all of the 25 parties late last night; is that right?
854 1 Q. If you were to do that calculation, 2 approximately, what would your new cost estimate be? 3 A. Approximately? 4 Q. Correct. 5 A. Approximately, it would be probably somewhere 6 around 2 billion dollars, maybe a little bit more. 7 Q. And in order to get that estimate, would you 8 decrease your 3.8 billion dollars by about 47 percent; is 9 that how you would arrive at that estimate? 10 A. I -- I don't know what the percentage would be. 11 It depends on the split between oil and natural gas wells. 12 Q. Thank you. That's all the questions I have. 13 HEARING OFFICER ORTH: Thank you, Ms. Fox. 14 Ms. Paranhos, I see you on screen. Do you have questions? 15 MS. PARANHOS: Thank you, Madam Hearing Officer. 16 I just have one line of questioning. 17 SURREBUTTAL CROSS-EXAMINATION OF JOHN R. DUNHAM 18 BY MS. PARANHOS: 19 Q. Mr. Dunham, you may have gone over this before, 20 but I just want to be crystal clear; did your analysis 21 take into account any of the saved gas that would accrue 22 to operators if they employ methods such as leak detection 23 and repair, for example, that can in some instances ensure 24 more gas is sent to a pipeline, rather than vented to the 25 atmosphere?	856 1 A. I -- I'm not sure when it was sent to the 2 parties. That was, I believe, done by Counsel. 3 Q. Okay. Did you create this surrebuttal PowerPoint 4 before today? 5 A. Yes, I did. 6 Q. Okay. So did you understand that you used a 7 mistaken number of wells in your modeling before today? 8 A. Yes, I did. 9 Q. Okay. And yet, this morning when you provided 10 your testimony to the Board, you did not indicate to them 11 that you understood this mistake at that time; is that 12 right? 13 A. No, sir, I did say that my number was not 14 correct. 15 Q. Oh, you did this morning? 16 A. Yes, I did, sir. 17 Q. Okay. Thank you very much. That's all the 18 questions I had. 19 HEARING OFFICER ORTH: Thank you, Mr. Nykiel. 20 Mr. De Saillan, do you have questions of Mr. Dunham? 21 MR. DE SAILLAN: I have no questions. Thank you. 22 HEARING OFFICER ORTH: Thank you. Mr. Rose? 23 MR. ROSE: No questions. 24 HEARING OFFICER ORTH: Thank you. Mr. Janoe? 25 MR. JANOE: No questions, Madam Hearing Officer.

857 1 HEARING OFFICER ORTH: Thank you. Mr. Butzier? 2 MR. BUTZIER: No questions. 3 HEARING OFFICER ORTH: Ms. Gutierrez? 4 MS. GUTIERREZ: No questions. Thank you. 5 HEARING OFFICER ORTH: Thank you. 6 Mr. Colclasure? 7 MR. COLCLASURE: No questions. Thank you. 8 HEARING OFFICER ORTH: And Ms. Witherspoon? 9 MS. WITHERSPOON: No questions. Thank you. 10 HEARING OFFICER ORTH: All right. Thank you very 11 much. I'm going to turn to the Board at this time for 12 their questions. While I'm doing that, in the event you 13 are an attendee rather than a panelist and there is a 14 question you would have for Mr. Dunham, please reach out 15 in the Chat. 16 EXAMINATION OF JOHN R. DUNHAM BY THE BOARD 17 HEARING OFFICER ORTH: Madam Chair, do you have 18 questions of Mr. Dunham? 19 CHAIRPERSON SUINA: Thank you, Madam Hearing 20 Officer. I appreciate that. Mr. Dunham, thank you again 21 for coming back and clarifying some points that were -- 22 were discussed earlier by other witnesses. I just wanted 23 to go back to slide number 8, which is the one you're on. 24 I have a quick question. Here on the slide number 8, it 25 says that there's -- so you have a loss of operating in	859 1 this whole matrix of these -- of every individual well is 2 developed. We then take this cost -- this cost number, 3 which in this case basically goes into the -- into the 4 production side, and we -- we shock the system with that 5 new cost, so that our costs go up while our revenues stay 6 the same basically. And some wells become nonproductive, 7 they become not economical with those higher production 8 costs. 9 And what the model does, then, is it starts to 10 close those wells. As you close those wells, your ability 11 ratio goes up in the industry, and it closes wells until 12 it matches the profitability ratio at the beginning of the 13 exercise. So you're -- you're -- you're -- it would be 14 the industry holding itself harmless, basically. 15 CHAIRPERSON SUINA: Thank you for that 16 explanation. That's helpful to understand. I also want 17 to go -- I have another question. In the assumptions from 18 the data from the ten surveyed companies, were the inputs 19 an average of the data from the ten companies, or were 20 they the highest point or the lowest point average or 21 medium values? 22 MR. DUNHAM: They were -- they were both average 23 and medium values. We used average values when the 24 distribution of the answers was fairly normal -- fairly 25 tight. When there were outliers, your averages get -- get
858 1 oil and gas wells, and I understand in previous testimony 2 that there's a question about how the structure and the 3 analysis is done. But can you explain to us right now how 4 you translate the cost to industry and how that results in 5 your calculation of the loss of operating and -- operating 6 oil and natural gas wells? 7 MR. DUNHAM: Yes, ma'am. I'm going to -- we're 8 still sharing the screen, right? When -- when -- when we 9 built this model we broke down the costs of oil and 10 natural gas development, two separate industries into -- 11 into seven categories: exploration, permitting, drilling, 12 completion, production, transportation and remediation, so 13 that's the life cycle of a -- of a well. 14 The model is -- the model's unit of analysis is 15 physical wells, holes in the ground, so that's -- 16 everything is based on a per-well number. The number of 17 wells, oil and natural gas wells in New Mexico, are 18 basically lined up from the least productive, what's 19 identified as a stripper well, to the most productive. 20 And that's data that we have from the EIA, the Energy 21 Information Agency. 22 And that is put into a big matrix, and the costs 23 and the revenues from those wells, based on the price of 24 petroleum, the wellhead price, are compared against each 25 other, and some wells are profitable, some are not, and	860 1 goofy. Right? So, you know, if you average -- me and 2 Bill Gates together, our income is billions of dollars, so 3 you don't want to use the average, then, because it's 4 skewed. So in those cases we use a median, which is a 5 middle value. 6 CHAIRPERSON SUINA: Thank you for that further 7 explanation. And back to slide number 8, the significant 8 economic loss -- excuse me -- chart. 9 MR. DUNHAM: Which one? 10 CHAIRPERSON SUINA: Go ahead. 11 MR. DUNHAM: Was it this one? 12 CHAIRPERSON SUINA: Yes, yes. Sorry, I have 13 multiple screens up here. 14 So in the similar chart -- or sorry. In the 15 sentence in the report -- so in this chart, basically, the 16 number in Table 9 of the report went from about 22.8 17 million down to 14.35 million -- or 18.36 million, right? 18 MR. DUNHAM: Yes. Yes, I believe so. 19 CHAIRPERSON SUINA: Okay. So -- and then that -- 20 MR. DUNHAM: It's roughly half. 21 CHAIRPERSON SUINA: Yeah, yeah. And then that 22 22.86 referenced in your table, there's a sentence above 23 that on -- in your report on page 8, that the state 24 economy would face a 674 million loss? And then -- 25 MR. DUNHAM: Correct.

861 1 CHAIRPERSON SUINA: And then the state and local 2 taxes would fall by 2.9 million. And so, I'm trying to 3 draw a connection back to -- was -- were you able to 4 calculate the state economy loss -- that 674.2 million 5 dollar loss in relation to also the adjustments you made 6 for the impact to state and local businesses and personal 7 taxes? 8 MR. DUNHAM: Yes, ma'am. Based on -- based on 9 these assumptions on this slide, the loss to the economy 10 of the state would be about 423 million dollars. 11 CHAIRPERSON SUINA: Okay. Thank you for that 12 clarification. Thank you so much. And real quick, one 13 follow-up. So included in that 423 million, can you just 14 remind me what's included in that assumption or that 15 calculation? 16 MR. DUNHAM: Sure. 17 CHAIRPERSON SUINA: Is it taxes and additional 18 losses? 19 MR. DUNHAM: No, that's economic loss, so the 20 taxes are separate -- a separate number. That's the 14 -- 21 on this table, it's the 14.355 million dollars. 22 CHAIRPERSON SUINA: Okay. And -- 23 MR. DUNHAM: The 423 is a loss in sales, so to 24 speak. 25 CHAIRPERSON SUINA: Oh, okay, loss in sales of	863 1 if I have this correct; you pulled the wells number data 2 from the EIA and not from the OCD? 3 MR. DUNHAM: Of the 47,937 number? 4 VICE-CHAIR TRUJILLO-DAVIS: Yes. 5 MR. DUNHAM: Yeah, I used -- I used the -- I used 6 that number from the ERG number. 7 VICE-CHAIR TRUJILLO-DAVIS: Okay. And I 8 believe -- and I apologize, I thought the gentleman from 9 the OCD who testified said the same -- Powell perhaps. 10 HEARING OFFICER ORTH: It was Mr. Powell, Brandon 11 Powell. 12 VICE-CHAIR TRUJILLO-DAVIS: Yes, Mr. Powell. I 13 apologize. We're starting to get a lot of names in this 14 hearing. But he stated some different numbers for the 15 OCD, and I'm just curious why you used the EIA versus OCD 16 data. Was there an availability issue, or was -- can you 17 kind of just flesh that out for us? 18 MR. DUNHAM: To be quiet honest with you, I -- I 19 had totally screwed up my interpretation of their report 20 that was online, so I didn't want to do that again. So I 21 just took this number out of the testimony from ERG. It 22 was -- it was very close. It's a couple of thousand wells 23 different. 24 VICE-CHAIR TRUJILLO-DAVIS: Okay. Thank you for 25 clarifying that for me. I don't have any more questions.
862 1 oil and natural gas? 2 MR. DUNHAM: Yeah. Yeah, roughly, sales. 3 CHAIRPERSON SUINA: Okay. All right. Thank you 4 so much for that clarification, Mr. Dunham. 5 That's all I have for right now, Madam Hearing 6 Officer. 7 MR. DUNHAM: Thank you, ma'am. 8 HEARING OFFICER ORTH: Thank you, Madam Chair. 9 Vice-Chair Trujillo-Davis, do you have questions of 10 Mr. Dunham? 11 VICE-CHAIR TRUJILLO-DAVIS: Yes, thank you, I do 12 have a couple of questions. Mr. Dunham, did you -- did 13 you say that your numbers didn't account for loss of 14 royalties paid? 15 MR. DUNHAM: Correct. 16 VICE-CHAIR TRUJILLO-DAVIS: Okay. Is there a 17 reason why you didn't include that number? It seems like 18 it would be a significant number. 19 MR. DUNHAM: The royalty payments are, honestly, 20 not in the model that we -- that we built back in 2018, so 21 they just weren't in there, and that's what we were asked 22 to use as our base. 23 VICE-CHAIR TRUJILLO-DAVIS: Okay. Thank you for 24 clarifying that. And the other question I had was, I 25 think you mentioned that you pulled the wells -- let's see	864 1 HEARING OFFICER ORTH: Thank you. Member Cates, 2 do you have questions of Mr. Dunham? 3 BOARD MEMBER CATES: Yeah, one question, 4 Mr. Dunham. I think this has been covered, but I want to 5 make sure I understand this correctly. So in your 6 modeling and in your formulas, as you crunched the 7 numbers, one thing it sounds like you didn't do was factor 8 in the possibility that this gas that's escaping now, 9 could be brought to market under some -- you know, under 10 the provisions we're talking about here. Is that right, 11 which is the -- so the question is, did you include the 12 potential market gains from captured gases in your 13 calculations? 14 MR. DUNHAM: No, sir, I did not. 15 BOARD MEMBER CATES: And is -- is -- is -- is 16 there a reason for why that was the case? And I'm imaging 17 that it's just simply not discussed in the industry, 18 perhaps, but maybe there's more to it than that. 19 MR. DUNHAM: It wasn't my commission. My 20 commission was to develop cost numbers. From an 21 economist's perspective, one would -- an economist would 22 assume that if it was profitable to capture that gas and 23 sell it, that the industry would be doing it because 24 industry's job is to make profits. But I honestly don't 25 know how that works and it wasn't part of our -- our

865 1 commission to do. 2 BOARD MEMBER CATES: Got it. Okay. Thank you for 3 the testimony. Thanks. 4 HEARING OFFICER ORTH: Thank you. 5 MR. DUNHAM: Thank you, sir. 6 HEARING OFFICER ORTH: Member Bitzer, do you have 7 questions of Mr. Dunham? 8 BOARD MEMBER BITZER: Just one. I want to follow 9 Mr. Cates' line of questioning there, because I believe we 10 heard earlier in testimony that the recapture, resale, 11 recoupment was like 300 million, potentially. Does that 12 sound realistic to you? 13 MR. DUNHAM: I -- I have no idea, sir. I didn't 14 look at that. And it would depend very much on the price 15 of gas at the time. 16 BOARD MEMBER BITZER: That's all I have. 17 HEARING OFFICER ORTH: Okay. Thank you. Member 18 Duval? 19 BOARD MEMBER DUVAL: No questions. Thanks. 20 HEARING OFFICER ORTH: Thank you. Member Garcia? 21 BOARD MEMBER GARCIA: Yes, thank you. I just 22 have one question. So, Mr. Dunham, I appreciate that you 23 have your -- you're being candid in recognizing the 24 mistake on the number of wells, I appreciate that very 25 much, and that you've recalculated or given an estimate.	867 1 kind of junk bond rates. It doesn't make a huge bit of 2 difference if you go out five years or fifteen, because 3 the interest rate is not really bringing the numbers down 4 that much. 5 BOARD MEMBER GARCIA: Okay. Thank you very much. 6 That helps. Thank you. 7 HEARING OFFICER ORTH: Thank you. Member Honker, 8 do you have questions of Mr. Dunham? 9 BOARD MEMBER HONKER: No questions. Thank you. 10 HEARING OFFICER ORTH: All right. Thank you. 11 Mr. Hiser, will there be redirect? 12 MR. HISER: Madam Hearing Officer, I'm -- I'm 13 spinning. Okay. Just one question. 14 SURREBUTTAL REDIRECT EXAMINATION OF JOHN R. DUNHAM 15 BY MR. HISER: 16 Q. And I think, Mr. Dunham, there's confusion about 17 fifteen versus five years and averaging periods. There's 18 a total cost, right, of capital cost, and you can divide 19 that -- 20 A. Yes, sir. 21 Q. -- over five years or you can divide it over 22 fifteen years. Obviously, if you divide it over five 23 years, the cost for each of the five years is greater; if 24 you divide it over the fifteen years, the cost is less; is 25 that correct?
866 1 So it looks like the cost estimates between NMED and you 2 are coming closer together, but they're still -- let me 3 see if I have this correct -- NMED's cost estimate is 1.7 4 billion and yours is now 2.3; did I get -- did I get that 5 right? 6 MR. DUNHAM: Roughly. Roughly that. I didn't -- 7 I don't have that actual -- I'd have to run through that 8 cost model, but, roughly, that. 9 BOARD MEMBER GARCIA: Okay. I guess I have one 10 more question, is -- one of the things that seems to be in 11 contention is whether you amortized this cost over 15 12 years or -- I think you used five years. Could you 13 explain why you used five years? 14 MR. DUNHAM: Yes, five years is pretty much the 15 life of an oil and natural gas well. Roughly, 80, 85 16 percent of its production occurs over its first five years 17 for virtually all of these facilities. So that's why I 18 used five years. Fifteen years is kind of a random 19 number, too. It's just -- again, it is what OMB says to 20 use to discount when you're doing discounting for future, 21 you know, future costs or revenues. And that's just to 22 standardize their reports. It's not -- there's no hard 23 and fast rule why one would use that. 24 And to be honest, right now, interest rates are 25 so low, I mean, I think I used 3 and 1/2 percent, which is	868 1 A. The annual cost, yes. But the total -- the total 2 cost really is only going to differ depending on the 3 discounting that you do. A dollar in the future is worth 4 less than a dollar today. 5 Q. Correct. 6 A. So if I'm -- if I'm -- if I'm building something 7 ten years from now, that's \$100 in current dollars, it 8 will be -- a hundred dollars in nominal dollars; ten years 9 from now it will be worth less today. 10 Q. Right. And so, the major difference, then, is 11 just whatever that discount rate is that you're using? 12 A. Whatever that discount rate is, yeah. 13 Q. Okay. And -- 14 A. And right now, again, interest rates are very 15 low. 16 Q. All right. I think -- I know that I am tired of 17 five and fifteen years issues, so I will end my 18 questioning on that and turn it back over to Madam Hearing 19 Officer. 20 HEARING OFFICER ORTH: Thank you very much, 21 Mr. Hiser. And Mr. Dunham, if you would remove your 22 presentation there. 23 MR. DUNHAM: Okay. 24 HEARING OFFICER ORTH: There we go. 25 MR. DUNHAM: There we go.

869 1 HEARING OFFICER ORTH: Terrific. Thank you. 2 Ms. Katz? 3 MR. DUNHAM: Great. Thank you, ma'am. 4 HEARING OFFICER ORTH: Thank you. 5 There you are. Do I understand from the 6 spreadsheet that we'll be returning to the Department for 7 the next topic? 8 MS. KATZ: Yes, Madam Hearing Officer. Finally, 9 we will come around to the Department for the small 10 business facilities definition and provisions topic. The 11 Department is -- will call Susan Day and Liz -- Elizabeth 12 Bisbey-Kuehn as well as -- for the -- for the direct and 13 rebuttal summary, as well as Brian Palmer also for the 14 rebuttal summary. 15 HEARING OFFICER ORTH: All right. And will there 16 be slides and who will be driving them? 17 MS. KATZ: I believe there will be, but I can't 18 remember. Sorry. I think there are. Maybe -- 19 MS. KUEHN: There are slides that I'll be 20 sharing. Thank you. 21 HEARING OFFICER ORTH: All right. So go ahead, 22 Ms. Katz. I've already sworn all of your witnesses under 23 oath, so please go ahead. 24 MS. KATZ: Let me just make sure they're all on 25 the screen. I do not see Mr. Palmer at the moment.	871 1 MS. DAY: Yes, I do. 2 MS. KATZ: Ms. Kuehn, did you submit prefiled 3 direct and rebuttal testimony on the small businesses 4 facilities provisions? 5 MS. BISBEY-KUEHN: Yes, I did. 6 MS. KATZ: And your full written direct testimony 7 appears as NMED Exhibit 102, and your full written 8 rebuttal testimony on that topic appears in NMED Rebuttal 9 Exhibit 1? 10 MS. BISBEY-KUEHN: Yes. 11 MS. KATZ: Thank you. Do you have any changes to 12 your written testimony? 13 MS. BISBEY-KUEHN: I do not. 14 MS. KATZ: And do you adopt your written 15 testimony here today? 16 MS. BISBEY-KUEHN: Yes. 17 MS. KATZ: All right. Ms. Day, can you please 18 summarize the data analysis you conducted for the small 19 business facility definition? 20 MS. DAY: Yes. I prepared the analysis to 21 provide NMED with information on the revenues and 22 employment of the global ultimate parent companies -- 23 excuse me -- of the well owners-operators that would be 24 subject to the proposed new ozone rules. And NMED needed 25 these data as the basis for developing the small business
870 1 MS. KUEHN: And I still do need sharing 2 privileges. Thank you. 3 MS. KATZ: Okay. So this -- for the Board's 4 information, this testimony is appearing at -- the direct 5 testimony is at NMED Exhibit 102, that's Ms. Day and 6 Ms. Kuehn's testimony. And then the rebuttal testimony, 7 which includes Ms. Day, Ms. Kuehn and Mr. Palmer is at 8 NMED Rebuttal Exhibit 1. 9 SUSAN DAY AND ELIZABETH BISBEY-KUEHN 10 (Small Business Facility Topic) 11 having been previously duly sworn, were examined and 12 testified as follows: 13 DIRECT EXAMINATION OF SUSAN DAY AND ELIZABETH KUEHN 14 MS. KATZ: Okay. Ms. Day, let me start with you. 15 Have you submitted prefiled direct testimony on the small 16 business facilities provisions in this proceeding? 17 MS. DAY: Yes, I have. 18 MS. KATZ: And your full, written direct 19 testimony appears as NMED Exhibit 102? 20 MS. DAY: Yes, it does. 21 MS. KATZ: Do you have any changes to your 22 written testimony? 23 MS. DAY: I do not. 24 MS. KATZ: And do you adopt your testimony here 25 today?	872 1 facility definition. 2 I started with a list of 535 owner/operators 3 provided by NMED, which was compiled from the NMED 4 equipment data and the New Mexico Oil Conservation data. 5 Excuse me. Because the small business facility definition 6 applies to the entity at the highest level of ownership in 7 the corporate structure, I needed to identify the global 8 ultimate parent companies associated with each of these 9 owner/operators. 10 In order to link the owner-operators to their 11 global ultimate parent company, I submitted the list of 12 535 owner/operators to a vendor called NAICS Association, 13 LLC, or NAICS Association. And just to explain, NAICS 14 stands for Northern American Industry Classification 15 System. 16 NAICS Association uses Dun & Bradstreet data to 17 link each owner/operator to its global ultimate parent 18 company. Dun & Bradstreet is a corporation that provides 19 financial and other information on businesses. It's 20 well-known for creating a data universal numbering system 21 or DUNS number, that uniquely identifies more than 100 22 million companies around the globe. NAICS Association 23 locates the owner-operator in their database using name 24 and address matching. Once they locate the owner/operator 25 in their database, they know the DUNS number associated

873 1 with the owner-operator. 2 Using the owner/operator DUNS number, they then 3 attempt to provide the identity of the global ultimate 4 parent as well as the global ultimate parent's DUNS, NAICS 5 code, revenues and employment. NAICS Association used a 6 matching algorithm to identify each New Mexico 7 owner/operator or other affected facilities in their data. 8 This algorithm assigns a level of confidence to each 9 match. 10 Only matches with a high level of confidence were 11 retained, which results in NAICS Association matching 460 12 of the New Mexico owner/operators in their data. The 13 detailed explanation of how the matching algorithm works 14 can be found in my direct testimony. 15 NAICS Association then identified a global 16 ultimate parent company associated with 460 of the 535 New 17 Mexico owner/operators provided by NMED and OCD. 18 HEARING OFFICER ORTH: Ms. Day, are you still 19 speaking? 20 MS. KATZ: I'm sorry. I'm just talking to myself 21 because I didn't unmute myself. Sorry. 22 Ms. Day, did you include the federal small 23 business administration or SBA size standard for 24 potentially affected owners and operators in your 25 analysis?	875 1 The 355 small global ultimate parent companies 2 are associated with 359 small owner/operators and the 51 3 not small global ultimate parent companies are associated 4 with 77 not-small owner/operators. 5 MS. KATZ: And did it estimate revenues per well 6 and total oil and gas per well? 7 MS. DAY: Yes. I calculated an estimate of value 8 per well using two methods. For both methods, I used oil 9 and gas well production data for New Mexico 10 owner-operators and other affected facilities from the 11 GO-TECH website. These data include information on the 12 total number of wells per owner/operator, as well as the 13 total thousands standard cubic feet of gas and barrels of 14 oil produced by the owner/operator in the 18-month time 15 period between January of 2019 and June 2020. 16 Production data were available for 399, or 75 17 percent, of the 535 owner/operators. In method one, I 18 estimated average revenue per well for each owner/operator 19 by dividing the global ultimate parent revenues associated 20 with the owner/operator by the total number of wells 21 reported in the GO-TECH data for that owner/operator. 22 In method two, I estimated the average value of 23 the oil and gas production per well for each 24 owner/operator using dollars per barrel for oil and 25 dollars per million BTU for gas. The prices I used were
874 1 MS. DAY: Yes, I did. For context in this 2 rulemaking, I included the SBA size standards for 3 potentially affected owner/operators and other facilities. 4 SBA created these size standards to identify companies 5 that qualify for federal assistance programs. 6 They're intended to reflect the degree of 7 competition within individual industries so that 8 less-competitive firms would qualify for assistance. SBA 9 size standards vary by industry type as defined by a NAICS 10 code to reflect the unique competitive characteristics of 11 different industries. In some cases, SBA uses a revenue 12 standard; in other cases, the size standard is based on 13 the number of employees. 14 I used global ultimate parent company information 15 identified for each facility to determine how that global 16 ultimate parent would be classified based on the SBA's 17 size definition. In order to do this, I needed NAICS code 18 revenue and employment data. Not all global ultimate 19 parents had both revenue and employment data. I counted 20 406 unique -- excuse me -- unique ultimate parents with 21 both revenue and employment data. Of the 406 unique 22 glo -- excuse me -- global ultimate parent companies, I 23 found that 355, or 87 percent, meet the SBA definition of 24 small business and 51, or 13 percent, do not meet that 25 definition.	876 1 the New Mexico crude oil first purchase price, which was 2 \$45 per barrel; and will note this is a 24-month average 3 over the period of February 2019 to January 2021, and the 4 Henry Hub natural gas spot price, which was \$2.39 for BTU. 5 This is also a 24-month average, but over the period of 6 March 2019 to February 2021. 7 I estimated the average oil and gas value per 8 well by calculating the total production value, and that's 9 oil and gas combined, for all wells owned by each 10 owner/operator, then dividing that value by the total 11 number of wells per owner/operator as reported in the 12 GO-TECH data. 13 MS. KATZ: Thank you, Ms. Day. 14 Ms. Kuehn, turning to you, can you provide the 15 proposed definition of a small business facility? 16 MS. BISBEY-KUEHN: Yes. Under the proposed rule 17 a small business facility is defined as a source that is 18 independently owned or operated by a company that is not a 19 sub -- a subsidiary or a division of another business, 20 that employs no more than ten employees at any time during 21 the calendar year, and that has a gross annual revenue of 22 less than \$250,000. And employees include part-time, 23 temporary or limited-service workers. 24 MS. KATZ: And can you provide an overview of the 25 proposed requirements of Part 50?

877 1 MS. BISBEY-KUEHN: Yes. Part 50 is structured in 2 a way that there is a baseline set of requirements 3 applicable to all owners and operators, and then a tiered 4 set of requirements that apply based upon the equipment or 5 the source type, the PTE of the equipment or source, and 6 whether a facility meets the definition of a small 7 business facility as defined in this rule. 8 It's important to note that there are numerous 9 ways for the rule to apply or to not apply. It's also 10 important to note if you're in the rule, there are other 11 applicability thresholds in each section that determine 12 that, that applicability. 13 First of all, everyone is required to calculate 14 the potential to emit of equipment, and have that 15 calculation certified by a professional or in-house 16 engineer, and conduct leak monitoring and repair 17 requirements by specified deadlines, and that monitoring 18 frequency is determined by the facility PTE. 19 MS. KATZ: Can you provide an overview of the 20 requirements for small business facilities? 21 MS. BISBEY-KUEHN: Yes. An owner/operator of a 22 facility that meets the definition of a small business 23 facility must comply with those requirements that I just 24 listed, and a separate set of requirements in Section 125. 25 And, again, if a facility does not meet the definition of	879 1 costs, and to pay the full cost of recurring permit fees. 2 MS. KATZ: Thank you. And can you -- can you 3 summarize for the Board the basis for the proposed 4 definition in Part 50 for small business facilities? 5 MS. BISBEY-KUEHN: Yes. The proposed definition 6 is based upon three principal criteria that help delineate 7 between small, independent businesses and large, 8 vertically-integrated companies. The first criterion is 9 ownership structure, which we used to distinguish 10 companies that are independently owned and operated from 11 those that are not a subsidiary or a division of another 12 company, from larger corporations. 13 The difference, importantly, between small and 14 large companies includes the size of business, the number 15 of employees, revenue, legal structures, and financing and 16 tax requirements. Small and large companies may operate 17 within the same industrial sector; however, the 18 differences in how these companies operate in their 19 ability to finance, and its capital, and the well size can 20 affect their operations. 21 MS. KATZ: Thank you. 22 MS. BISBEY-KUEHN: The second criterion is the 23 number of staff employed by the company, which is an 24 indication of the company's personnel and staff resources 25 capacity, to interpret and implement the requirements of
878 1 a small business facility, the owner/operator would need 2 to comply with the other sections of Part 50, to the 3 extent that those section -- those sections actually apply 4 to that operation. 5 MS. KATZ: And Ms. Kuehn, can you discuss why 6 that -- the definition of small business facility is 7 appropriate in the Department's view? 8 MS. BISBEY-KUEHN: Yes. The Department developed 9 the definition of a small business facility to recognize 10 the unique challenges smaller, independent operators may 11 face in determining applicability of regulations and 12 financing the initial and ongoing costs of compliance. 13 Both the federal Clean Air Act -- and I'll speak 14 to this later as well -- and the Board's air quality 15 permit rules speak -- provide the definition of the small 16 business that's similar to that. And that's the slide 17 that I'm on. So let me just say that again. 18 The federal Clean Air Act and the Board's air 19 quality construction permit fee regulations at Part 75 20 contain provisions to the small businesses by providing 21 compliance assistance, and a tiered fee schedule that 22 gives a 50 percent reduction in the initial and annual 23 permit fees. And these programs were developed because 24 small businesses frequently lack the financial resources 25 necessary to evaluate regulations, and finance those	880 1 the rule. Larger companies have the financing capacity to 2 employ dedicated environmental health and safety 3 specialists. Based off that, the staff typically monitor 4 the company's compliance with numerous state and federal 5 environmental regulations and other regulations. 6 Small companies employing fewer numbers of 7 employees typically do not have the staffing or financial 8 capacity to finance dedicated environmental compliance 9 specialists. 10 And the third criterion is annual revenue. The 11 Department recognize that the cost of compliance to Part 12 50 may disproportionately impact the small companies and 13 may result in early abandonment of small business-owned 14 wells, which, in turn, may result in increased, 15 uncontrolled emissions from abandoned wells. 16 MS. KATZ: Can you explain how the Department 17 developed the thresholds in the definition of small 18 business facility? 19 MS. BISBEY-KUEHN: The Department evaluated the 20 report prepared by ERG and sorted the companies by the 21 annual global ultimate parent revenue and staffing levels. 22 The proposed thresholds were chosen because the data 23 compiled by ERG indicated that those thresholds balanced 24 the cost of compliance with Part 50 against the company's 25 ability to finance the costs of compliance, and would not

881 1 put the majority of companies at risk of becoming 2 insolvent and therefore cause wells to be abandoned 3 without remediation. 4 MS. KATZ: And can you provide a summary of the 5 Department's analysis and the cost of compliance for a 6 representative facility? 7 MS. BISBEY-KUEHN: Yes. The Department estimated 8 the annual average cost of compliance for a representative 9 well site, to determine the number of companies that could 10 finance those compliance costs. A representative facility 11 was developed and was assumed to have emissions greater 12 than 15 tons per year of VOCs; thus, requiring quarterly 13 LDAR monitoring, a storage vessel emitting greater than 2 14 tons per year, requiring a control device, and an annual 15 inspection of the storage vessel. 16 The annual average cost of compliance for the 17 representative facility was estimated at \$37,945; based on 18 an average cost of \$32,400 to controlled storage vessel, 19 around 4,300 for quarterly ozone monitoring, and 1,100 for 20 an annual inspection. 21 MS. KATZ: And can you discuss the results and 22 comparison to the estimated total revenue? 23 MS. BISBEY-KUEHN: The Department ranked the 24 companies by the GULT revenue, from the highest to lowest 25 revenue, and screened those companies that reported 1	883 1 wells would qualify as a small business facility under the 2 threshold established in the rule; 15 percent of the total 3 number of companies subject to Part 50 would be considered 4 owners or operators of small business facilities; and 9 5 percent of the total wells would be considered small 6 business facilities. 7 We also estimated revenue from a well producing 7 8 and 1/2 barrels of oil per day, to give the Board an idea 9 of what those annual estimated revenues are for some of 10 the smaller wells. That arithmetic is available here. We 11 have estimated 7 and 1/2 barrels of oil per day, 365 days 12 a year, at \$60 a barrel of crude oil as \$164,250 per year, 13 or \$450 per day. And comparing this estimated revenue 14 with the estimated cost of complying with the small 15 business provisions of Part 50 would cost companies 16 approximately 2.6 percent of their total revenue to 17 comply. 18 And this estimated cost of compliance again, for 19 the representative facility, was 37,945; as a percentage 20 of the total estimated revenue is approximately 23 percent 21 of total revenue. 22 MS. KATZ: Thank you, Ms. Kuehn. And at this 23 point -- oh, there, sorry, you're not finished. 24 MS. BISBEY-KUEHN: No. Yeah, and so, here, we 25 have the definition of the small business facility as
882 1 million dollars or less and \$250,000 or less, to determine 2 how many of these companies had per well site revenue less 3 than the estimated cost of compliance for the 4 representative facility. The Department determined that 5 96 companies reported a GULT revenue of 100 million 6 dollars or less and had a calculated revenue per well less 7 than \$37,945. These 96 companies operate approximately 8 9,200 wells or 18 percent of the total wells. 9 The Department then determined that 54 companies 10 reporting a GULT revenue of \$250,000 and less had a 11 calculated revenue per well less than 37,945. Again, 12 that's the estimated cost of compliance for the 13 representative facility. And these companies operate 14 approximately 4,600 wells or 9 percent of total wells. 15 MS. KATZ: Thank you. So can you now walk -- 16 walk the Board through the proposed requirements of -- of 17 the rule in Section 125 for small business facilities? 18 MS. BISBEY-KUEHN: NMED determined the average 19 annual cost of compliance for facility meeting the small 20 business definition at \$4,300 based on a conservative 21 quarterly LDAR monitoring requirement. According to the 22 report, few companies had a revenue of less than \$4,300 23 per well. NMED proposed the \$250,000 threshold as the 24 revenue threshold to meet the small business definition. 25 Eighty-two companies that operate those 4,500	884 1 previously discussed, and we have the section of the rule, 2 125, that contains the provisions for those facilities 3 that qualify as a small business. 4 And so, as you can see, the owners and operators 5 are required to ensure that all equipment is operated and 6 maintained consistent with manufacturer specifications. 7 The owner/operator is required to calculate VOC and NOx 8 emissions from the facility on an annual basis, and that 9 calculation shall be based on the actual production or 10 processing rates of the facility. 11 We also require in a company-wide database to 12 track OVC and NOx emissions for all subject sources. And 13 to comply with the requirements of the monitoring 14 requirements of Subsection C or D of Section 116, which 15 we'll hear later in this rulemaking hearing. Those are 16 the provisions of fugitive emissions and leak detection 17 requirements. 18 The recordkeeping requirements include an annual 19 certification, demonstrating that the company continues to 20 meet that definition; the calculated annual emissions from 21 each facility in a company-wide annual VOC and NOx 22 emission calculation for all subject facilities. And the 23 reporting requirement includes the reporting of the 24 initial small business certification within 60 days of the 25 effective date of this part, and then by March 1st each

885 1 calendar year thereafter. 2 MS. KATZ: Thank you, Ms. Kuehn. And I do want 3 to ask you if -- if we received any -- from any of the 4 other parties, if any -- if they suggested any changes to 5 our -- to our thresholds in the small business definition, 6 or if they -- or if they took issue specifically with the 7 data that we provided associated with that definition in 8 their -- in any of their direct or rebuttal testimony? 9 MS. BISBEY-KUEHN: No, the other parties have not 10 provided specific feedback on the cost estimates that we 11 have prepared, the thresholds that have been set. We have 12 requested feedback on the definition and the concept 13 numerous times, and we have not received that engagement 14 from the other parties. 15 And we really do need engagement with this 16 concept in order to right-size this definition. And 17 without that engagement, it has been -- it has not moved 18 the concept forward in any meaningful way. 19 MS. KATZ: Thank you. That is all for the 20 summary on the direct and rebuttal. 21 HEARING OFFICER ORTH: Ms. Katz, Ms. Kuehn and 22 Ms. Day, we will turn to questioning. 23 Ms. Fox, do you have questions of the panel? 24 MS. FOX: No questions. Thank you, Madam Hearing 25 Officer.	887 1 A. Certainly. And -- and I'm not exactly sure what 2 statute that -- is that the state small business statute? 3 Q. It's the state -- yes, it's the state Small 4 Business Regulatory Relief Act. I'm sorry, I should have 5 told you -- said that at the beginning. 6 A. Sure. Thank you. Yes, and so that does provide 7 an example of one threshold that has been established 8 under state statute and that may be appropriate in certain 9 publications. 10 Here, we need to balance the need for strong 11 emission reductions with the number of companies that 12 would qualify as a small business. So this was really 13 tailored toward the companies that we have operating here. 14 Q. Did you look at what would -- how many companies 15 might qualify under this alternative 50 employee, from the 16 state act definition? 17 A. I think that may be covered in another question 18 in the next round of surrebuttal. 19 Q. Okay. Thank you. We'll look forward to that 20 then. Appreciate, as always, your insights. Thank you. 21 HEARING OFFICER ORTH: Thank you, Mr. Hiser. 22 Mr. Rose, do you have questions? 23 MR. ROSE: I do. 24 CROSS-EXAMINATION OF ELIZABETH BISBEY-KUEHN 25 BY MR. ROSE:
886 1 HEARING OFFICER ORTH: Ms. Paranhos? 2 MS. PARANHOS: Thank you, Madam Hearing Officer. 3 I have no questions. 4 HEARING OFFICER ORTH: Thank you. Mr. Jaynes? 5 MR. JAYNES: Thank you, Madam Hearing Officer. 6 We have no questions. 7 HEARING OFFICER ORTH: Thank you. Ms. Devore? 8 May not be with us. 9 Mr. Nykiel? 10 MR. NYKIEL: No questions. Thank you. 11 HEARING OFFICER ORTH: Thank you. Mr. De 12 Saillan? 13 MR. DE SAILLAN: No questions. Thank you. 14 HEARING OFFICER ORTH: Thank you. Mr. Hiser? 15 MR. HISER: Madam Hearing Officer, I just have 16 one question, I think, probably for Ms. Kuehn. 17 CROSS-EXAMINATION OF ELIZABETH BISBEY-KUEHN 18 BY MR. HISER: 19 Q. Ms. Kuehn, when you were looking at this, did the 20 Department give any consideration, or how did you address 21 under 14-4A-3 Subsection E. of the New Mexico Statutes 22 Annotated, the state statutory definition of a small 23 business means a business entity, including affiliates, 24 that employees 50 or fewer full-time employees. And using 25 that 50, compared to the 10 that you ended up with?	888 1 Q. Let me make sure that -- I don't know if I ought 2 to let you see me on video this late in the day. But I'm 3 not sure exactly who this should go to, so I'll let 4 Ms. Kuehn or Ms. Day decide between them how to answer 5 this. My understanding is that the proposal is predicated 6 on two pieces: the number of employees and the -- and the 7 gross revenues. 8 As to the number of employees, does the rule 9 define, or have you evaluated what -- what would 10 constitute an employee for purposes of this section? 11 A. We have included in the definition what should be 12 considered employees. 13 Q. Could you -- would that include contractors -- 14 contractor employees? 15 A. It would not, I believe, include contract 16 employees. I don't believe that was the intent, to 17 include contract employees. 18 Q. For example, if a company were to decide that a 19 function that could be performed by an employee of the 20 company, but decided to contract that responsibility to a 21 third-party contractor, would the third-party contractor 22 and their employees count toward the count of number of 23 the employees? 24 A. I think we'll have to -- I don't have an answer 25 for that right now. I think I'll have to think about that

889 1 question and return to that question. 2 Q. Thank you. In terms of the gross revenue 3 provision that I think you explained, or Ms. Day did, the 4 assumptions that went into that, and I think you testified 5 that there would be a certification that would be 6 performed by these companies on an annual basis. 7 Is that -- I'm just trying to figure out if, for 8 example, the price of the commodity was such that they 9 exceeded the gross revenue threshold in a given year, 10 would -- if they could not certify that they were a small 11 business at the certification point, would that -- would 12 then they be in violation for the previous year, and not 13 adhering to some of the requirements, or would the 14 responsibility be prospective from that point on, until 15 the next year? It's not clear exactly when the obligation 16 to meet requirements, that they would be exempted from, 17 would suddenly become applicable. 18 A. Thank you for that question. And that's exactly 19 the type of issue that we needed feedback on when we 20 developed this concept. And there are certainly ways to 21 resolve that, with indexing with the market, with the 22 commodity price, or other options. 23 But that, we simply have not received any 24 engagement on this concept and so we have not been able to 25 kind of address those -- those questions.	891 1 why the decision was made on the cut-off number that -- 2 that you're proposing here. Where that came from? 3 A. The ten employees, again, was a proposal to be -- 4 meant to be a starting point on this definition, with the 5 expectation that the owners and operators of the 6 stakeholders would engage with the definition. That -- 7 the permitting regulation that I cited previously has that 8 same employee threshold. 9 Q. But -- but those are -- those thresholds only 10 apply to facilities that are subject to the permitting 11 program, correct? 12 A. That's correct. 13 Q. As it currently exists? 14 And do you know what -- whether most well sites, 15 in fact, qualify for permitting or are subject to air 16 quality permitting under Part 72? 17 A. It depends on the production and equipment and 18 emissions data. 19 Q. Have you evaluated what percentage of those wells 20 are currently subject to either the NOI or the permitting 21 requirements? 22 A. We do -- we do have that. I don't have those 23 numbers right in front of me, but we could provide 24 those -- that data. 25 Q. Okay. Thank you.
890 1 Q. I take it, Ms. Kuehn, you've not referred to 2 Mr. Davis's rebuttal testimony or the discussions that 3 your counsel has had with me concerning that definition, 4 as being engagement? 5 A. We haven't received significant and meaningful 6 engagement on data in any way. There may have been 7 conversations I'm not aware of that occurred between 8 counsel, but I'm not privy to those conversations. 9 Q. And I take it, that the small business staff 10 initiative that you're proposing or that you did propose 11 was -- was first available when the Department proposed 12 its rules to the Board, correct? The discussion -- a 13 version of these rules, that was out earlier, initially 14 before the Department's petition, to not have any similar 15 small business exemptions, did it? 16 A. It did not. 17 Q. Okay. So did the Department engage with the 18 industry or the affected -- potentially affected small 19 businesses when it originally decided to propose this 20 small business definition? 21 A. We did not specifically engage with small 22 businesses on the concept. 23 Q. Okay. Thank you. 24 And -- and with respect to the employee number 25 cut-off, it wasn't clear, and maybe I just missed it as to	892 1 MR. ROSE: I have no further questions, Madam 2 Hearing Officer. 3 HEARING OFFICER ORTH: Thank you, Mr. Rose. 4 Mr. Janoe, do you have questions? 5 MR. JANOE: No questions, Madam Hearing Officer. 6 Thank you. 7 HEARING OFFICER ORTH: Thank you. Mr. Butzier? 8 MR. BUTZIER: No questions. Thank you. 9 HEARING OFFICER ORTH: Thank you. Ms. Gutierrez? 10 MS. GUTIERREZ: No questions. Thank you. 11 HEARING OFFICER ORTH: Thank you. 12 Mr. Colclasure? 13 MR. COLCLASURE: No questions. Thank you. 14 HEARING OFFICER ORTH: Thank you. And 15 Ms. Witherspoon? 16 MS. WITHERSPOON: No questions. Thank you. 17 HEARING OFFICER ORTH: Thank you. I'll turn now 18 to the Board for their questions. While I'm doing that, 19 in the event you are an attendee and would pose a question 20 to the panel, please reach out in the Chat. 21 EXAMINATION BY THE BOARD OF ELIZABETH BISBEY-KUEHN 22 AND SUSAN DAY 23 HEARING OFFICER ORTH: Madam Chair, do you have 24 questions of Ms. Kuehn or Ms. Day? 25 CHAIRPERSON SUINA: Madam Hearing Officer, I

893 1 don't have any questions. 2 HEARING OFFICER ORTH: Thank you. Vice-Chair 3 Trujillo-Davis? 4 Vice-Chair Trujillo-Davis, can you hear me? 5 VICE-CHAIR TRUJILLO-DAVIS: I could hear you, but 6 I, apparently, couldn't unmute. I don't have any 7 questions. I apologize. Thank you. 8 HEARING OFFICER ORTH: All right. Thank you. 9 Member Cates? 10 BOARD MEMBER CATES: No questions. Thank you. 11 HEARING OFFICER ORTH: Thank you. Member Bitzer? 12 BOARD MEMBER BITZER: Just real quick. What is 13 the fee that you're proposing to waive 50 percent of? 14 MS. BISBEY-KUEHN: Thank you, Member Bitzer. 15 That reference is to a construction permit fee regulation 16 that exists. And -- 17 BOARD MEMBER BITZER: Is it -- is it a variable 18 fee depending on factors then? 19 MS. BISBEY-KUEHN: Correct. There's not a 20 rule -- there's not a fee associated with this rule, but 21 there is a permit -- an annual initial permit fee and 22 annual permit fee for air permits. And the annual permit 23 fee is indexed to the CPI. 24 BOARD MEMBER BITZER: Okay. So it changes from 25 year to year, goes up a bit, maybe a bit more next year.	895 1 BOARD MEMBER GARCIA: Yes. Thank you. I do have 2 a question for Ms. Kuehn. So what I'm understanding is 3 with your proposal on the small business exceptions or 4 changes for small businesses, you did not receive feedback 5 from the industry in order to make changes to the rule? 6 For instance, in the last version, which was September 7 16th, that does not reflect any feedback from the industry 8 on this provision, right? 9 MS. BISBEY-KUEHN: That's correct. 10 BOARD MEMBER GARCIA: Okay. So it sounds like 11 you're getting some feedback now. At least, Mr. Rose 12 suggested some questions about this. So might you, then, 13 make some changes to this rule again, based on the 14 feedback you get during this hearing? 15 MS. BISBEY-KUEHN: I think we would be very 16 supportive of making -- right-sizing this definition to 17 meet the intent of the definition, which is to provide a 18 tiered set of requirements and provide regulatory relief 19 for those true small businesses, while also securing the 20 necessary emissions reductions. And so this definition is 21 intended to balance those two. 22 BOARD MEMBER GARCIA: That's all I have, Madam 23 Hearing Officer. 24 HEARING OFFICER ORTH: Thank you, Member Garcia. 25 Member Honker?
894 1 And you're proposing to waive half of that for the small 2 businesses? 3 MS. BISBEY-KUEHN: That's not -- that's not 4 correct. The concept of the small business facility was 5 that the definition includes two threshold: one is a 6 revenue-based threshold, and the second is an employee 7 number threshold. And the limit is ten employees, and 8 that number of ten employees was derived from another 9 regulation, which is the construction permit fee 10 regulation. And so we simply modeled that part of the 11 definition after the construction permit fee regulation. 12 BOARD MEMBER BITZER: So if I -- if I'm 13 understanding your proposal correctly, you propose to 14 waive a portion of that fee for bona fide small 15 businesses? 16 MS. BISBEY-KUEHN: We are proposing to have a 17 reduced set of requirements for facilities that qualify as 18 a small business facility. And there is no fee associated 19 with this rule. 20 BOARD MEMBER BITZER: Okay. I was just trying to 21 figure out what we were actually talking about there. 22 That's all I have. Thank you. 23 HEARING OFFICER ORTH: Thank you. Member Duval? 24 MEMBER DUVAL: No questions. 25 HEARING OFFICER ORTH: Thank you. Member Garcia?	896 1 BOARD MEMBER HONKER: No questions. Thank you. 2 HEARING OFFICER ORTH: All right. Thank you. 3 Ms. Katz, will there be any redirect? 4 MS. KATZ: Yes, Madam Hearing Officer. I have 5 just a few questions for Ms. Kuehn. 6 REDIRECT EXAMINATION OF ELIZABETH BISBEY-KUEHN 7 BY MS. KATZ: 8 Q. Ms. Kuehn, did we make the proposed definition of 9 small business facilities available with our petition for 10 rulemaking? 11 A. Yes, we did. 12 Q. And we made the data on which that definition was 13 based available at the end of May, correct? 14 A. That's right. 15 Q. And so has IPANM had over four months to evaluate 16 that data and the proposed language of the definition and 17 the concepts, and provide suggestions to us? 18 A. Yes. 19 Q. And has IPANM had two opportunities to submit 20 written prefiled technical testimony on this -- on this 21 topic? 22 A. Yes. 23 Q. And do you recall any testimony raising the issue 24 regarding contract employees in either their direct or 25 rebuttal testimony?

897 1 A. No. 2 Q. And has -- has IPANM or any party submitted any 3 proposed changes to the small business definition in their 4 technical testimony, which is required under the 5 Board's -- as required under the Board's rulemaking 6 procedure? 7 A. No. 8 Q. Do you -- do conversations between counsel 9 constitute testimony that the Department and the Board can 10 take into account when deciding what provisions of a rule 11 to adopt? 12 A. No. 13 Q. Can you explain why the previous approach of 14 exempting stripper wells was -- and marginal wells was 15 rejected in favor of this small business facility 16 approach? 17 A. Yes. That proposal contained a low PTE exemption 18 and a stripper well exemption, and between those two 19 exemptions, they simply left too many emissions on the 20 table and exempted too many wells from the requirements to 21 reduce emissions under this rule. 22 And this was an -- this definition was an attempt 23 to balance those two -- those two needs, to provide some 24 necessary regulatory relief to act -- to true independent 25 small operators and secure meaningful emission reductions	899 1 New Mexico has a lead on small business issue for industry 2 and so it might be best to start with IPA rather than us. 3 We're sort of more, me, too. 4 HEARING OFFICER ORTH: All right. And so that 5 was Mr. Davis, right? 6 MR. ROSE: That's correct, Madam Hearing Officer. 7 HEARING OFFICER ORTH: All right. I trust -- I'm 8 sure I made him a panelist at some point. Do I need to 9 make him a panelists again? No, there he is. Okay. 10 Terrific. Mr. Davis, you're still under oath. 11 Mr. Rose, go ahead. 12 MR. ROSE: Thank you, Madam Hearing Officer. 13 JEFFREY "RYAN" DAVIS, 14 having been previously duly sworn, was examined and 15 testified as follows: 16 DIRECT EXAMINATION OF JEFFREY "RYAN" DAVIS 17 BY MR. ROSE: 18 Q. Mr. Davis, did you -- we've already qualified you 19 in terms of your experience and we've identified yesterday 20 that you provided direct and rebuttal testimony. Does 21 your direct testimony, IPA Exhibit 2, include your 22 testimony related to the proposed small business 23 definition and exception? 24 A. Yes, sir, it does. 25 Q. It doesn't look like his -- there we go.
898 1 from those wells. 2 Q. And so it wouldn't be true that only smaller, 3 independent operators would be owners of stripper wells or 4 marginal wells, correct? 5 A. That's correct. 6 MS. KATZ: Okay. Thank you. That's all I have. 7 HEARING OFFICER ORTH: Okay. Thank you very 8 much, Ms. Katz, Ms. Kuehn and Ms. Day. I know, Ms. Day, 9 it's been a long day for you, and night. If there's no 10 reason not to excuse the panel, we will do that. Thank 11 you, all. 12 MS. KATZ: I cannot have them excused just yet 13 because there is surrebuttal on this. 14 HEARING OFFICER ORTH: Okay. Good. 15 MS. KATZ: So, unfortunately, Ms. Day has to 16 continue into the wee hours here. 17 HEARING OFFICER ORTH: Okay. I meant excuse them 18 until after we hear from Mr. Smitherman and Mr. Davis; is 19 that it? 20 MS. KATZ: (Nodding head.) 21 HEARING OFFICER ORTH: All right. Great. So 22 thank you, ladies, I'm going to -- 23 MR. HISER: Madam Hearing Officer? 24 HEARING OFFICER ORTH: Yes. 25 MR. HISER: This is Eric Hiser for NMOGA. IPA	900 1 And does your rebuttal testimony, which we've 2 identified -- I think it's been admitted as IPANM 10 -- 3 that includes your rebuttal testimony with respect to the 4 small business definition and exemption provision? 5 A. Yes, sir, it does. 6 Q. Can you briefly summarize your direct and 7 rebuttal testimony for the Board, please? 8 A. Yes, sir, I can. So in my direct and also 9 rebuttal I provided my understanding of the Department's 10 drafted provisions for the small business facility 11 definition, as well as the provisions for the small 12 business facilities. During the direct, we -- we were 13 unable -- we followed the spreadsheet that was provided, 14 but it wasn't until we've seen the Department's direct 15 testimony that we fully understood the analysis that they 16 undertook to develop those thresholds. 17 In reviewing the provisions, it's evident that 18 the Department intended to reduce the requirements 19 applicable to small businesses in New Mexico. And IPANM 20 is supportive of this reduction in requirements applicable 21 to small businesses. In stripper wells in the state, we 22 do not believe that it provided -- that the proposal 23 effectively accomplished that objective. 24 And the first thing to note was the ten employee 25 cut-off. We felt this was very limiting, and testified to

901 1 that effect. And that we felt this would exclude many of 2 the smaller operators that are in need of relief from some 3 of these provisions. In my rebuttal testimony, I 4 referenced the Small Business Regulatory Relief Act, which 5 Mr. Hiser brought up earlier, defines a small business as 6 an entity that employs 50 or fewer full-time employees. 7 Moving to the gross revenue cut-off, we also felt 8 that this was very limiting. And our biggest concern with 9 the gross revenue threshold is that it's tied to commodity 10 prices, which are dependent on market conditions. The 11 variability with commodity pricing creates a lack of 12 regulatory certainty there for the regulated community. 13 We felt like this was -- was not a good measure of the 14 profitability of the operators or producers. And that the 15 gross revenue does not include operating expenses or 16 capital expenditure that operators and producers are going 17 to have. 18 As I mentioned before, it wasn't until I was able 19 to review the direct testimony of Susan Day, that I fully 20 understood the extent of the effort the Department had 21 went through to design the thresholds for small business 22 facility. I do want to commend the Department for the 23 extensive analysis that was performed there. But from my 24 understanding, the Department established the \$250,000 25 gross revenue cut-off based on an operator's average well	903 1 for that reason, we have significant concerns that there 2 are thousands of wells that would be plugged -- 3 prematurely plugged and abandoned due to the provisions 4 that are in the proposed rule. 5 One of the things that I did after reviewing 6 Ms. Day's testimony is, I took a look at the well counts 7 and production data that was used by ERG in their 8 analysis, and ran the same gross revenue calculations. 9 And it was very difficult, I found, to find a natural 10 break in terms of gross revenue. The main takeaway 11 from -- from looking at that data, was, you know, the 12 higher percentage of stripper wells that an operator had, 13 the higher -- the higher percentage of gross revenue would 14 be taken up for the cost of compliance. 15 And -- and we stressed this both in direct and in 16 rebuttal that we believe this relief needs to be based on 17 individual wells, and that we believe a well's production 18 and/or potential to emit are better measures to base the 19 appropriate relief on. And again, this is due to the fact 20 that we make economic decisions on a well-by-well basis. 21 MR. BAAKE: Madam Hearing Officer, I think Clean 22 Air Advocates would like to object to all of this 23 testimony and move to strike it on relevance grounds. 24 There has been no proposal put forth on this provision by 25 IPANM or anyone else. It's effectively a stipulated
902 1 revenue being less than the cost of compliance. 2 So, in essence, what they were doing with that 3 cut-off was providing relief for operators in which all of 4 their wells would not be able to support the cost of 5 compliance, which does provide some relief for a very 6 small group of operators. It prevents them from being 7 insolvent due to the cost of compliance, but it doesn't 8 provide the appropriate relief for small businesses or 9 stripper wells in the State of New Mexico. 10 First off, the average cost of compliance that 11 the Department used or ERG used in the analysis did not 12 include any cost of compliance with pneumatic controllers 13 and pumps that are in Section 122. And this is something 14 that IPANM has had significant concerns on and we will 15 address later. 16 Secondly, this only provides relief, again, as I 17 stated, for companies who operate a small number of wells, 18 in which the -- on-average, those wells cannot support the 19 cost of compliance. There are many operators, many 20 members of IPANM who operate a large number of stripper 21 wells and, you know, operators make an economic decision 22 on a well-by-well basis. We're not going to absorb the 23 cost of compliance on one well if it can't support that 24 cost by another well's revenue. 25 We look at wells on an individual basis. And so,	904 1 proposal, the parties have had the chance to suggest 2 alternatives and IPANM did not, so we think that has been 3 waived. I'm not sure why we're here. 4 HEARING OFFICER ORTH: Thank you, Mr. Baake. 5 Mr. Rose, your response? 6 MR. ROSE: Madam Hearing Officer, in fact, IPANM 7 did propose alternatives, including striking the small 8 business proposal. The testimony is in response to a 9 Department proposal, which the Board can consider. It's 10 not a stipulated proposal; IPANM did not agree to the 11 proposed regulatory provision and is expressing its 12 concern to the Board, in terms of the Board making a 13 decision on whether or not to adopt it. 14 So we don't believe -- we believe it's highly 15 relevant and we believe that the testimony should come in. 16 We think it's relevant to the decision as to whether or 17 not the Board should adopt the Department's small business 18 definition and the exemptions for small businesses as 19 well. 20 HEARING OFFICER ORTH: All right. Thank you. 21 Mr. Baake, the objection is overruled. I'd like to hear 22 the testimony and rebuttal. 23 Go ahead, Mr. Rose. 24 MR. ROSE: Thank you. 25 Q. (BY MR. ROSE) Mr. Davis, would you -- had you

905 1 finished your testimony and response on your explanation 2 of your rebuttal testimony? 3 A. No, sir, I have a little -- a little more I'd 4 like to cover. 5 Q. Could you go ahead and give the remainder of that 6 testimony? 7 A. Yes, sir. So I was just getting to the proposal 8 that IPANM had put forward. In our direct testimony we 9 had proposed to strike the small business definition and 10 its provisions due to the fact that we do not believe this 11 provides the necessary relief. After reviewing the direct 12 testimony from the Department, we came back and indicated 13 that we felt like the preproposal draft structure, based 14 on production and PTE, was the more suitable structure to 15 provide relief for small business. 16 And so that was where -- in rebuttal is where we 17 made that recommendation of looking back to the relief 18 being based on a well's production or potential to emit. 19 One of the things that we noted was the Department had put 20 that in the preproposal draft and then had removed it. In 21 reviewing rebuttal testimony, the reason for removing that 22 was they felt that it left a lot of wells unregulated. 23 And I -- I, in rebuttal, highlighted the fact 24 that the requirements that are set forth there still 25 subject these wells to, as Ms. Kuehn said earlier,	907 1 response to others' rebuttal and the Department's 2 testimony here, or would that -- would that occur later 3 after others have given their -- their direct and rebuttal 4 testimony? When -- it wasn't clear to me exactly how 5 we're scheduling surrebuttal at this point, or what could 6 be labeled as surrebuttal. 7 MS. KATZ: Yeah, it's a little confusing, but I 8 would think -- so it would typically go that it would be 9 the Department and then whoever the parties that had all 10 submitted the direct and rebuttal testimony, and then we 11 would go in the opposite order for the surrebuttal. I'm 12 okay if you want to do that here. I don't know if -- I 13 think, I guess NMOGA is -- I'm not sure if they were 14 planning to put Mr. Smitherman on. 15 HEARING OFFICER ORTH: That's my understanding 16 from the spreadsheet. So if you don't object and 17 Mr. Hiser doesn't object, I would just as soon take his 18 surrebuttal now. 19 MS. KATZ: Yes, I agree. 20 MR. HISER: That's fine with NMOGA, Madam Hearing 21 Officer. I think it's more expeditious. 22 HEARING OFFICER ORTH: All right. Thank you very 23 much. Go ahead. Thank you, Ms. Katz. 24 Go ahead, Mr. Rose. 25 MR. ROSE: Thank you.
906 1 requirements for proper operation and maintenance of the 2 equipment to reduce emissions, as well as complying with 3 the fugitive requirements with the leak detection and 4 repair under Section 116. And then, in addition to that, 5 the operators have the requirements to calculate, maintain 6 a company-wide database of the VOC and NOx emissions, 7 while being subject to the reporting requirements of 8 Section 112. 9 These -- you know, these subsections of the rule 10 still apply to these wells, but we believe that the best 11 structure to provide relief is based on the production and 12 PTE. And these wells would still be subject to regulation 13 and the associated emission reductions. And that 14 concludes my -- my summary. 15 MR. ROSE: Madam Hearing Officer, is it 16 appropriate for -- at this time for me to ask him to 17 respond to the Department's direct and rebuttal testimony 18 or will that be handled later? 19 HEARING OFFICER ORTH: Ms. Katz, do you have an 20 opinion about that? 21 MS. KATZ: I'm sorry, I'm a little bit confused. 22 So, Mr. Rose, are you saying -- so this is 23 supposed to be the summary of the direct and the rebuttal? 24 MR. ROSE: Correct. And my question is does 25 this -- am I permitted to question him in surrebuttal in	908 1 Q. (BY MR. ROSE) Mr. Davis, have you reviewed the 2 rebuttal testimony submitted by the Department and other 3 parties in this proceeding? 4 A. Yes, sir. 5 Q. And did the Department's rebuttal or other 6 parties' rebuttal testimony on this issue change your -- 7 or IPANM's position on the acceptance and the propriety of 8 the Department's proposal? 9 A. No, sir. 10 Q. Could you explain, please? 11 A. Reviewing -- I'll focus primarily on the NMED 12 rebuttal here. You know, looking at their rebuttal, it's 13 in Exhibit 1, as we read through there, the Department did 14 not support initially striking of the small business 15 provisions. And, specifically as I walked through their 16 rebuttal, on page 99, the NMED agreed with IPANM that 17 gross revenues are not a measure -- a good measure of 18 profitability, but pointed back to EPA's guidance, where 19 direct compliance costs are sometimes used to compare 20 sales or gross revenues. 21 Responding to that, you know, while -- while that 22 practice may be, you know, exist in a general sense, IPANM 23 does not believe that that's the appropriate impact 24 analysis for oil and gas operations in New Mexico. And 25 throughout reviewing testimony, it's evident that the

909 1 Department based a lot of the provisions within this rule 2 on Colorado Reg 7. And Colorado Reg 7 does have some 3 blanket relief in there, based on average per-well 4 production regardless of the size of the company or 5 revenue. 6 And then, similarly, with Pennsylvania, I think 7 it's worth noting that, you know, Pennsylvania has 8 separate regulations for their conventional and 9 unconventional operations or development, and with that, 10 the Pennsylvania regulations provide relief for the 11 low-producing conventional production. So that's kind of 12 my general response on -- on the rebuttal. 13 One other thing which has come out today in 14 testimony as well is, is NMOGA nor IPANM providing 15 testimony addressing the data that was compiled by ERG, 16 and that we didn't make any proposal back to the 17 Department, you know, in terms of revisions to the 18 definition. 19 So, my response there, you know, the data -- the 20 review of the data initially was -- was -- was not 21 sufficient for us to fully understand how the Department 22 developed the basis for the definition. Again, once I was 23 able to review the direct testimony there, I was able to 24 follow the Department's analysis, but everything that I've 25 stated previously still applies.	911 1 how that might apply to your company or others in IPANM? 2 A. Yes. So we looked at the data provided by the 3 Department and looking at the companies based on the 4 revenue cut-off, you know, it was difficult to determine 5 how the 250 or the ten employees, you know, provided 6 relief for those operators that we consider small -- small 7 operators or small businesses in New Mexico. 8 I work for a third-generation, family-owned and 9 operated company here in Farmington. We've got 18 10 full-time employees, five part-time employees, and we 11 operate 66 wells in New Mexico. And we would consider 12 ourselves a small business, and we would -- we would not 13 qualify for that small business exemption. 14 And then, just as an example, there are -- there 15 are other companies that are similar family-owned 16 companies that, you know, have over 100 employees, operate 17 a thousand wells, but when you look at their average daily 18 production, it's in the range of 24, 25 MCF, so they're 19 operating a bunch of stripper wells. They would not 20 qualify on either side of this, but if you take their 21 gross revenue and their cost of compliance based on the 22 average of \$37,000 or almost \$38,000, their cost of 23 compliance is more than their gross annual revenue, which, 24 again, those -- those folks, we feel like should see some 25 relief. And they're not going to see any relief based on
910 1 We -- we still do not believe that those 2 thresholds or, really, the basis being on gross revenue is 3 a good way to provide relief. We're very concerned that 4 as commodity prices fluctuate, that an operator may find 5 themselves subject to regulation, and this was included in 6 my -- in my testimony. 7 Q. Mr. Davis, just for clarification, for those who 8 aren't necessarily familiar with the jargon, can you 9 explain the distinction that you drew on the Pennsylvania 10 regulations between conventional and unconventional wells? 11 A. Yes, sir. So most of the conventional production 12 would be your vertical, kind of, your legacy production. 13 As we've moved into the modern development, we've moved 14 into targeting what we call unconventional resource plays. 15 These would be the shell plays where we've gone 16 horizontally; we drill horizontal wells and put a 17 multistage fracture treatments on those wells. 18 The distinction in Pennsylvania specifically in 19 the regulation is, the conventional versus unconventional. 20 They regulate the more modern, unconventional wells in a 21 more strict manner. They're held to much higher standards 22 than the older, lower-producing conventional wells. 23 Q. And with respect to employees, could you explain 24 to the Board -- my understanding is you work for a company 25 that has a limited number of employees. Could you explain	912 1 this provision being based on the number of employees and 2 gross revenue. 3 MR. ROSE: Thank you, Madam Hearing Officer. I 4 have no further questions. 5 HEARING OFFICER ORTH: All right. Thank you, 6 Mr. Rose and Mr. Davis. We need a short break before we 7 begin public comment. So let's come back at 5. For those 8 of you on the platform to offer public comment, I'll be 9 calling you in this record: Adrienne Sandoval, Anna 10 Hansen, Linda Burchfiel, Karen Adams and Anthony Cook. 11 Let's come back at 5. Thank you. 12 (Recess taken from 4:49 p.m. to 5:00 p.m.) 13 HEARING OFFICER ORTH: Let's come back from the 14 break, please. 15 We've reached the 5:00 public comment period. 16 And public comments -- just a few things about public 17 comment. It is limited to five minutes. It is taken 18 under oath, as with all comment and testimony in this 19 hearing, and it is accepted through audio, not video. 20 I will call you in the following order: Adrienne 21 Sandoval, Anna Hansen, Linda Burchfiel, Karen Adams, and 22 Anthony Cook. In the event there is someone on the 23 platform who did not reach out by email earlier, I am 24 still happy to take your comment. Please reach out in the 25 Chat. If you struggle with the Chat function, please call

913 1 or text Pam Jones at (505) 660-4305 and we'll get you on 2 the list. 3 So Ms. Sandoval? Director Sandoval, I am 4 unmuting you. Can you hear me? 5 MS. SANDOVAL: I can. Thank you. Can you hear 6 me? 7 HEARING OFFICER ORTH: Yes, your voice is coming 8 through loud and clear. If you would please spell your 9 first name. Sandoval is the common spelling. Spell your 10 first name. 11 MS. SANDOVAL: It's Adrienne, A-D-R-I-E-N-N-E. 12 HEARING OFFICER ORTH: Thank you. If you would 13 raise your right hand. Do you swear or affirm to tell the 14 truth? 15 MS. SANDOVAL: I do. 16 HEARING OFFICER ORTH: Thank you. I will start 17 your five minutes now. 18 MS. SANDOVAL: Thank you, Ms. Orth. 19 ADRIENNE SANDOVAL, 20 having been first duly sworn or affirmed, 21 gave public comment as follows: 22 PUBLIC COMMENT BY ADRIENNE SANDOVAL 23 MS. SANDOVAL: My name is Adrienne Sandoval; I'm 24 the director of the Oil Conservation Division within the 25 New Mexico Energy, Minerals and Natural Resources	915 1 rules went before the Oil Conservation Division in 2 January, and were approved by the commission in March. 3 They subsequently went into effect on May 25th. ENMR's 4 rules require that the upstream and midstream operators 5 achieve a 98 percent gas capture target by the end of 6 2026. 7 These high-level requirements will dovetail well 8 with the Environment Department's proposed rules, putting 9 this state on task to achieving its climate goals while 10 also achieving meaningful waste and emissions reduction. 11 The Energy, Minerals and Natural Resources Department 12 support the proposed rules before the Environmental 13 Improvement Board and encourages the Board to adopt these 14 rules. Thank you for your time today. 15 HEARING OFFICER ORTH: Thank you, Director 16 Sandoval. It sounded like you were reading from a written 17 statement and I'm wondering if you'd be willing to send 18 that to Pam Jones or to me so that we can share it with 19 the court reporter. 20 MS. SANDOVAL: Yes, I can. I can send that to 21 you. 22 HEARING OFFICER ORTH: Thank you so much. 23 MS. SANDOVAL: Thank you. 24 HEARING OFFICER ORTH: Let me call then on 25 Commissioner Hansen. Commissioner Hansen, I'm unmuting
914 1 Department. The Environment Department and the Energy, 2 Minerals and Natural Resources Department have been 3 working together since early 2019 to develop complimentary 4 strategies to reduce waste and air pollution from New 5 Mexico's oil and gas industry. 6 These strategies are designed to meet the state's 7 climate targets, improve air quality, and reduce methane 8 waste by ensuring salable resources are captured, which 9 increases royalties and revenues to the state. The 10 agencies set out to draft separate, but complimentary and 11 nonmutually exclusive rules consistent with the distinct 12 statutory responsibilities. ENMR's rules addressed 13 natural gas waste, while NMED's rules addressed air 14 pollution. 15 The agencies worked together for nearly two years 16 and during that time jointly held multiple meetings with a 17 diverse group of stakeholders, convened the methane 18 advisory panel, to create a comprehensive technical 19 support document and met frequently to discuss stakeholder 20 input in rule development. This approach enabled the 21 agencies to develop rules that are not duplicative, do not 22 conflict and do not leave regulatory gaps. 23 The two sets of rules are designed to work 24 together to provide full coverage of the industry to 25 achieve the climate targets New Mexicans deserve. ENMR's	916 1 you. Can you hear me? 2 MS. HANSEN: I can. Can you hear me? 3 HEARING OFFICER ORTH: Yes, I can. If you would 4 raise your right hand, please. Do you swear or affirm to 5 tell the truth? 6 MS. HANSEN: I do. 7 HEARING OFFICER ORTH: All right. I will start 8 your five minutes now. Thank you. 9 ANNA HANSEN, 10 having been first duly sworn or affirmed, 11 gave public comment as follows: 12 PUBLIC COMMENT BY ANNA HANSEN 13 MS. HANSEN: Good afternoon. I am Santa Fe 14 County Commissioner Anna Hansen. Thank you to the 15 Environmental Improvement Board for the opportunity to 16 comment. As a local, elected official, it is my job to 17 make my community a safer and healthier place for my 18 constituents. One of the ways we can do that is by 19 regulating harmful pollutants from oil and gas sector. 20 The EIB should finalize the strongest possible 21 rules to curb methane and other industry emissions to 22 ensure all New Mexicans can breathe clean air. Santa Fe 23 County has supported stronger methane-capture rules 24 since -- with Resolution 2015-51 and Resolution 2018-28. 25 And as a strong advocate for human survival on the planet,

917 1 I strongly advocate to cut greenhouse gases. 2 We need strong rules. And on that point, I would 3 like to comment on how improvements could be made to the 4 rule: protection for frontline communities, and it is 5 critically important that the leak inspection program 6 proposed by NMED in July be adopted and that the final 7 rule is strengthened to protect frontline communities 8 requiring more frequent inspections to find and fix leaks. 9 Also, completions: The final rule must 10 strengthen to ensure New Mexico incorporates leading 11 approaches to address pollution during well completions. 12 It should require operators to capture or combust 13 emissions during completions, including the initial flow 14 back stage, as the State of Colorado now requires. 15 And with pneumatics, the final rule should 16 strengthen pollution cutting measures on pneumatic 17 controllers, and the second -- the second largest source 18 of oil and gas methane pollution in New Mexico. 19 NMED should require companies to inspect 20 gas-powered pneumatics for malfunction and leaks, as well 21 as accelerate the timeline for operators to retrofit 22 equipment with zero bleed and zero emissions. Reducing 23 methane waste and pollution is a key step in Governor 24 Lujan Grisham's strategy to address air pollution and 25 climate impacts caused by the oil and gas facilities.	919 1 Commissioner Hansen. 2 Let me look for Linda Burchfiel. I think I saw 3 her earlier on the platform. There you are, 4 Ms. Burchfiel. I am unmuting you. Can you hear me? 5 MS. BURCHFIEL: Yes. Can you hear me? 6 HEARING OFFICER ORTH: Yes. Speak a little 7 bit -- a little bit louder. 8 MS. BURCHFIEL: Okay. 9 HEARING OFFICER ORTH: If you would spell your 10 last name, please. 11 MS. BURCHFIEL: Okay. It's B-U-R-C-H-F-I-E-L. 12 HEARING OFFICER ORTH: Thank you. Raise your 13 right hand. Do you swear or affirm to tell the truth? 14 MS. BURCHFIEL: Yes, I do. 15 HEARING OFFICER ORTH: Thank you. I'll start 16 your five minutes now. 17 LINDA BURCHFIEL, 18 having been first duly sworn or affirmed, 19 gave public comment as follows: 20 PUBLIC COMMENT BY LINDA BURCHFIEL 21 MS. BURCHFIEL: Okay. To begin, I want to thank 22 the EIB for this opportunity to comment. The Environment 23 Department's proposed rule to limit ozone precursors is 24 strong, but it does need to be strengthened in three areas 25 in order to protect New Mexicans.
918 1 The Governor has committed to enact 2 nation-leading methane emission rules. The proposed NMED 3 rules will complement rules finalized by the New Mexico 4 Oil Conservation Commission, OCC, in March 2021, the bans 5 of practice of routine venting and flaring at new and 6 existing wells across the state. 7 Rural communities, tribal communities, children 8 and the elderly are especially at risk. It is an 9 environmental justice issue. A recent analysis made it 10 clear that tribal communities often suffer from 11 disproportionately high pollution levels. New Mexico is 12 home to the two energy producing regions that are among 13 the nation's most polluted counties: Eddy, Lea, San Juan, 14 Rio Arriba and Chaves Counties, the five New Mexico 15 counties home to 97 percent of the state's oil and gas 16 wells all -- are all at risk of violating federal ozone 17 standards of 70 parts per billion. 18 In closing, we need to create the strongest rules 19 on ozone and be a leader for the rest of the nation. We 20 must support the rules NMED has proposed, and make them 21 stronger. I am grateful for the opportunity to comment. 22 Thank you for your service to our community, and I look 23 forward to seeing strong rules being passed. Thank you 24 very much. 25 HEARING OFFICER ORTH: Thank you very much,	920 1 First, the rule needs to be adjusted to improve 2 the area that New Mexicans who live near oil and gas 3 production breathe. The American Lung Association gave an 4 F grade for ozone to our top oil and gas producing 5 counties: Lea, Eddy and San Juan in its 2021 state of the 6 air report. 7 Neither I nor my family lives within a half mile 8 of wells, but over 100,000 New Mexicans do. And they have 9 suffered lung problems for too long. The health of those 10 families is important as that of your family. Production 11 wells located there will need inspections and leak repair 12 more often than once a year, to ensure that they are not 13 leaking ozone precursors. 14 The second adjustment is to extend the rule to 15 capture or combust emissions during completions of oil or 16 gas wells, including during the initial flow back stage, 17 as well as during redevelopment of an existing well. 18 Finally, the Environment Department should 19 strengthen this rule to cut pollution from pneumatic 20 controllers. Companies should inspect pneumatics for 21 malfunctions and leaks and accelerate the timeline to 22 retrofit equipment with zero bleed or zero emission 23 pneumatic controls. 24 In addition to these three adjustments, I want to 25 urge the Environment Department to stick to their

921 1 requirement for annual inspections, even for those wells 2 with low production and assumed low potential to emit. 3 While industry argues that their potential for damage is 4 minimal, these low-emitting wells together produce more 5 than 60 percent of air pollutants according to John 6 Goldstein, of the Environmental Defense Fund. 7 These proposed regulations are a good start and I 8 urge you to strengthen them by requiring more frequent 9 inspections for wells located near homes, and by extending 10 the rule to include completions and redevelopment, as well 11 as pneumatic controllers. Thank you. 12 HEARING OFFICER ORTH: Thank you very much, 13 Ms. Burchfiel. 14 Let me move now to Karen Adams. There you are, 15 Ms. Adams. I've unmuted you. Can you hear me? 16 MS. ADAMS: I can. Thank you for taking my 17 little talk today. I do appreciate -- 18 HEARING OFFICER ORTH: Hold on. Yes. Your last 19 name is A-D-A-M-S? 20 MS. ADAMS: That is correct. 21 HEARING OFFICER ORTH: All right. Would you 22 raise your right hand. Do you swear or affirm to tell the 23 truth? 24 MS. ADAMS: I do. 25 HEARING OFFICER ORTH: All right. I'll start	923 1 improve on, I think we should limit the amount of 2 regulations that are put on this industry. And I thank 3 you for your time. 4 HEARING OFFICER: Thank you very much, Ms. Adams. 5 All right. Let's go to Anthony Cook. Mr. Cook, 6 I am unmuting you. 7 MR. COOK: Hello. 8 HEARING OFFICER ORTH: Hello. If you would 9 please -- standard spelling on first and last name. And 10 would you raise your right hand? 11 MR. COOK: Yes. 12 HEARING OFFICER ORTH: Do you swear or affirm to 13 tell the truth? 14 MR. COOK: Yes, I do. 15 HEARING OFFICER ORTH: All right. I'm starting 16 your five minutes now. 17 ANTHONY COOK, 18 having been first duly sworn or affirmed, gave public 19 comment as follows: 20 PUBLIC COMMENT BY ANTHONY COOK 21 MR. COOK: Okay. So I'm actually -- currently, I 22 live in Roswell, so right outside the Permian Basin. And 23 I'm a teacher now, but I used to work for Department of 24 Health for about five years as a health educator and also 25 as nutritionist. And I grew up in Carlsbad, so I've grown
922 1 your five minutes now. 2 KAREN ADAMS, 3 having been first duly sworn or affirmed, 4 gave public comment as follows: 5 PUBLIC COMMENT BY KAREN ADAMS 6 MS. ADAMS: Okay. I certainly won't be taking a 7 full five minutes of your time, but I do want to question 8 the logic behind the petition for the regulatory change 9 regarding the gas and oil sector. The most important job 10 I have right now is being a grandmother to three 11 grandchildren who attend the APS schools. And I know that 12 the gas and oil industry provides in just Bernalillo 13 County alone, over 400 million dollars to these schools. 14 And the education of our children is already lagging on a 15 national level, and I don't think we're doing ourselves 16 any favors by limiting the monetary resources we gain from 17 this industry. 18 This industry, you know, it becomes unpopular for 19 really unknown reasons, and I'm not sure that all of the 20 science is there to support the complaints. I think we 21 can be a leader in this industry. I think they're always 22 working to make it more secure and more safe, but we need 23 to provide for our children. We need jobs in our state 24 and we are, unfortunately, a very poor state. 25 So if this is something that we can continue to	924 1 up there my whole life, been around the whole area. And 2 it's definitely transformed a lot since I've grown up 3 there. 4 I mean, at nighttime, if you just drive outside 5 the city, it's glowing from all the flaring that's going 6 on there. And so it's a huge difference than when I was a 7 kid, where you would go out, it's pitch black, you could 8 see the Milky Way just 20 minutes outside of town, and now 9 that's not really possible. 10 Although that's just light pollution, that's one 11 of the many pollutions or problems that we have, but I do 12 feel like we need stronger regulations on emissions and 13 emission standards, and also on who is regulating what's 14 going on. To me, the way I see it is most of the industry 15 is self-regulated. If they spill, they report their 16 spill. They report when they clean it up, they write the 17 report, submit it to Santa Fe or NMED, wherever that 18 office may be at, and somebody just rubber stamps it. 19 Nobody actually goes out in the field and says, oh, this 20 company cleaned up their own spill. Right? And the way I 21 see it is, like, that would be like me self-reporting my 22 electric bill or my water bill every month. 23 If they said I went over a certain kilowatt usage 24 or so many gallons of water, then I would be fined. Well, 25 then, I would never go over, right, because I don't want

925 1 to be fined. So that's kind of one way I see it. 2 Another thing, too, is that we are also the 3 cheapest state to drill in, and we have the least amount 4 of regulation when it comes to drilling and our bond price 5 is also the lowest. I know someone mentioned that we need 6 to reduce regulation, but by increasing regulation and 7 increasing bond prices, we, therefore, increase the amount 8 of jobs and revenue that we get from oil and gas industry. 9 Right now, the bond price for, like, well areas 10 is like \$20,000 and they can drill multiple wells on those 11 sites, and each well to remediate them could be anywhere 12 from 40- to 80- or \$120,000. So whatever that \$20,000 13 bond didn't cover, we, the taxpayers, then have to foot 14 the bill. So although some people may see it as 15 detrimental to the industry, they actually enjoy driving 16 here because it's the cheapest place. 17 With that, also being said, the Environment 18 Department doesn't really have any staff to regulate 19 what's going on, so although we say all of these things on 20 paper, I would like to see something happen with actual 21 jobs being put in place, where people want to work and 22 live in those areas. Because the cost of living is so 23 high in Eddy County and Lea County, most of the 24 Environment Department jobs do not cover the cost of 25 living in those places. So most of those workers don't	927 1 have to be addressed and studied, and there should be 2 something where people can go and get help for being 3 exposed to toxic substances, volatile organic compounds 4 and things of that nature, especially produced water. 5 Another thing is that produced water can also 6 produce polyfluoroalkyl substances, which are considered 7 forever substances that never go away. If anybody would 8 like to do research, you could look at Clovis Air -- 9 the -- the military base in Clovis, the Air Force over 10 there did a lot of testing with a fire retardant chemical 11 that has the PFAS chemical or the forever chemicals, and 12 now there's tons of ranchers and farmers whose livelihoods 13 and water is polluted. So they can't drink the water, 14 they can't use the livestock, they can't do everything 15 because it's polluted with a cancerous substance. This 16 same substance is in -- 17 HEARING OFFICER ORTH: I'm sorry. Mr. Cook? 18 MR. COOK: Yes. 19 HEARING OFFICER ORTH: Your five minutes is 20 approaching. Would you wrap up, please? 21 MR. COOK: Okay. Yes. So this same substance, 22 this forever chemical has also been proven to be present 23 in produced water, which is actually radioactive waste and 24 has tons of toxic chemicals and substances in it, which 25 often gets poured on the ground or isn't correctly
926 1 want to work for the Environment Department, they'd rather 2 work for the oil and gas industry, where they're going to 3 get paid a fair wage. 4 So there's multiple factors involved in this 5 besides just a piece of paper saying we should increase 6 regulation. We have also got to have the boots on the 7 ground to do it. Another thing that's very upsetting with 8 this bill is that when they went from state to state -- I 9 mean, not state to state, but city to city, especially in 10 the Permian and the San Juan Basin, their big push was 11 public health and protection of public health, yet there 12 has been zero collaboration with New Mexico Department of 13 Health or other health agencies or entities. 14 And New Mexico Environment Department hasn't done 15 anything to actively address public health issues, where 16 in the Permian Basin or the Southeast region has the 17 highest cases of asthma, of ER visits for asthma for 18 children and adults. And this was before massive drilling 19 and increased drilling operations and fracking in the 20 Southeast region. So they knew that there were health -- 21 that there were health disparities in our region, and then 22 release more volatile organic compounds and things like 23 that into the air, to pollute the air more, and increase 24 and exacerbate these problems. 25 So there's also these health impacts that also	928 1 disposed of in our region and could contaminate our water 2 table. So, thank you. 3 HEARING OFFICER ORTH: Thank you, Mr. Cook. 4 All right. No one has reached out in the Chat, 5 so I believe I've come to the end of public comment for 6 today. There are more than two dozen other opportunities 7 for public comment at 9, 1 and 5 each subsequent day of 8 the hearing. Thank you, all. 9 We'll return at this point to the technical case. 10 When we broke, we had heard from Mr. Davis. And I think 11 if we just have Mr. Davis's questioning, then we can end 12 for the day if that's all right with everyone. 13 Ms. Katz, do you have questions of Mr. Davis? 14 And can we get Mr. Davis back on the screen. There you 15 are. 16 MS. KATZ: Thank you, Madam Hearing Officer. I 17 just have a couple of hopefully really quick questions. 18 CROSS-EXAMINATION OF JEFFREY "RYAN" DAVIS 19 BY MS. KATZ: 20 Q. So I know that you -- you have -- Mr. Davis, 21 thank you for your testimony. I know you've said this in 22 so many words, but I just wanted to get you to say it one 23 more time. So IPANM did not actually suggest any 24 alternative approaches to the revenue or employee 25 threshold in the definition, correct? You just -- you

929 1 just want it removed, and to go back to the -- the 2 prepetition draft stripper well exemption; is that 3 correct? 4 A. That's correct. 5 Q. Okay. Thank you. And would you agree that there 6 are potential-to-emit thresholds that are included 7 throughout the rule in the various provisions, addressing 8 specific equipment and processes that would give relief to 9 lower-emitting facilities? 10 A. I do. I mean, that's one of the reasons that we 11 originally proposed the leading or removing that 12 provision. I would say with the exception of pneumatics, 13 pneumatics is -- well, and the liquid transfer. 14 Originally, there was no applicability threshold for 15 liquid transfer requirements, and all wells are subject to 16 the pneumatic provision. 17 Q. Okay. Thank you, Mr. Davis. That's all I have. 18 A. Thank you. 19 HEARING OFFICER ORTH: Thank you. Ms. Fox, do 20 you have questions of Mr. Davis? 21 MS. FOX: Thank you, Madam Hearing Officer. I 22 do. 23 CROSS-EXAMINATION OF JEFFREY "RYAN" DAVIS 24 BY MS. FOX: 25 Q. Hello, Mr. Davis. My name is Tannis Fox and I	931 1 rule, that the party include that language for recommended 2 modifications within the Notice of Intent? 3 A. Are you asking whether I was aware of that? 4 Q. Yes. Are you familiar with that rule of the 5 Board's? 6 A. Yes. 7 Q. In your rebuttal testimony, you mentioned the 8 definition of the small -- of small business under New 9 Mexico statute, correct? 10 A. Yes, ma'am. 11 Q. Which is 50 employees or less, correct? 12 A. Yes, ma'am. 13 Q. And the independents have not provided any 14 economic analysis, have you, on the impact of NMED's 15 proposed rule on oil and gas operations with 50 employees 16 or less; is that correct? 17 A. That is correct. 18 Q. And you haven't proposed to the Board any 19 modification to the small business facility definition 20 that would include that state definition of small 21 business, correct? 22 A. Correct. 23 Q. Then, also in your rebuttal testimony, you 24 mentioned the former stripper well exemption that appeared 25 in a draft of NMED's proposed rule in 2020; is that
930 1 represent nine organizations in this proceeding that we 2 collectively refer to as Clean Air Advocates. 3 Mr. Davis, you submitted direct testimony in this 4 proceeding, correct, on behalf of the independents? 5 A. That is correct. 6 Q. And with that direct testimony, you-all filed 7 Exhibit 1, which is your proposed modifications to NMED's 8 proposed rules; is that correct? 9 A. Yes, ma'am. 10 Q. And within that Exhibit 1 within your proposed 11 modifications, you did not propose any amendments to the 12 small business facility definition, correct? 13 A. That is correct. 14 Q. And then you filed rebuttal testimony in this 15 proceeding, correct? 16 A. Yes, ma'am. 17 Q. And then with that rebuttal testimony, the 18 independents did not file any additional proposed 19 amendments with that rebuttal testimony, correct? 20 A. That's correct. 21 Q. And are you familiar with the EIB's rule at 22 20.1.302 A 5, which says -- you may not be familiar with 23 that citation, but are you familiar with the Board's 24 requirement that requires in any Notice of Intent, if a 25 party wants to propose recommended modifications to a	932 1 correct? 2 A. That is correct. 3 Q. In your rebuttal testimony, you don't supply any 4 analysis or data or financial analysis for the Board, of 5 the impact of NMED's proposed rule on stripper wells, do 6 you? 7 A. No. 8 Q. And nor do you propose any modified language to 9 the small business facility definition that would include 10 stripper wells, correct? 11 A. Correct. 12 Q. Then, in your rebuttal testimony, you mentioned 13 the low PTE exemption that had been in this previous draft 14 of NMED's proposed rule, correct? 15 A. Correct. 16 Q. And you-all don't provide to the Board any 17 analysis or data or economic analysis of the impact of 18 NMED's rule on -- you just called it low emitting -- low 19 emitting facilities, have you? 20 A. No, ma'am. 21 Q. And you haven't proposed any modified language to 22 the small business facility for the Board to consider, 23 that would include low emitting facilities, correct? 24 A. Correct. 25 MS. FOX: Thank you very much. That's all the

933 1 questions I have. 2 HEARING OFFICER ORTH: Thank you, Ms. Fox. 3 Ms. Paranhos, do you have questions of Mr. Davis? 4 MS. PARANHOS: No questions. No questions, Madam 5 Hearing Officer. 6 HEARING OFFICER ORTH: All right. Thank you. 7 Mr. Jaynes. 8 MR. JOHNSON: No questions, Madam Hearing 9 Officer. 10 HEARING OFFICER ORTH: Thank you. And I think 11 that was you, Mr. Johnson, right? 12 MR. JOHNSON: Yes, ma'am. I'm speaking on behalf 13 of Mr. Jaynes. 14 HEARING OFFICER ORTH: Right. I just wanted the 15 transcript to be clear. 16 MR. JOHNSON: Okay. Thank you. 17 HEARING OFFICER ORTH: I don't believe Ms. Devore 18 is with us. Mr. Nykiel? 19 MR. NYKIEL: No questions. Thank you. 20 HEARING OFFICER ORTH: Thank you. Mr. De 21 Saillan? 22 MR. DE SAILLAN: No questions. Thank you. 23 HEARING OFFICER ORTH: Thank you. Mr. Hiser? 24 MR. HISER: No questions. Thank you. 25 HEARING OFFICER ORTH: Thank you. Mr. Janoe said	935 1 I have that right in my head? Related to the 2 difference -- related to your statement that -- that these 3 two states had different regs where they separated 4 conventional versus unconstitutional; is that correct? 5 MR. DAVIS: That's correct, regarding the small 6 business provision. We did provide some language that was 7 similar to the Colorado approach in pneumatics, which 8 we'll get to later, but not regarding the small business. 9 CHAIRPERSON SUINA: Okay. And thank you for that 10 clarification. And in that discussion you had earlier, 11 you had talked about, you know, the difference between a 12 conventional and unconventional well. I think Mr. Rose 13 asked for additional explanation for all of us on the 14 Board. By chance, do you have a percentage in New Mexico 15 what the -- what the breakdown is between conventional and 16 unconventional? 17 MR. DAVIS: I don't off the top of my head. I 18 would say the majority of the wells classified as stripper 19 wells would fall into the legacy or conventional side of 20 things, but I don't know the exact number of what's 21 unconventional in the state. 22 CHAIRPERSON SUINA: Okay. Thank you for that. 23 And one more question regarding that, even though I know 24 there was no additional language proposed, but I just want 25 to have this correct in my head. So with unconventional
934 1 he has no questions. Mr. Butzier? 2 MR. BUTZIER: No questions. Thank you. 3 HEARING OFFICER ORTH: Thank you. Ms. Gutierrez? 4 MS. GUTIERREZ: No questions. Thank you. 5 HEARING OFFICER ORTH: Thank you. 6 Mr. Colclasure? 7 MR. COLCLASURE: No questions. Thank you. 8 HEARING OFFICER ORTH: All right. And 9 Ms. Witherspoon. She may have departed. 10 All right. I'm going to turn now to the Board 11 members for their questions. In the event you are an 12 attendee with a question, please reach out through the 13 Chat and we'll follow-up on it. 14 EXAMINATION BY THE BOARD OF JEFFREY "RYAN" DAVIS 15 HEARING OFFICER ORTH: Madam Chair, do you have 16 questions of Mr. Davis? 17 CHAIRPERSON SUINA: Thank you, Madam Hearing 18 Officer. I just have a couple just for clarification in 19 my head here. Mr. Davis -- sorry, I don't see you. There 20 you are. Okay. You had mentioned there was -- you had 21 mentioned the regulations in Colorado and Pennsylvania -- 22 or Pennsylvania -- Pennsylvania as having separate regs 23 for conventional versus unconventional. And I understand 24 from Ms. Fox's examination and questioning that there was 25 no additional language proposed; is that correct? Just so	936 1 wells versus conventional wells, along the line of why 2 other states have different -- you know, separate 3 regulations that separate the two, do you see any 4 additional emissions coming from conventional wells? Or 5 what's the difference between maybe potential emissions 6 from both types of wells? 7 MR. DAVIS: So it varies from well to well, but I 8 would say in general, most of your conventional or 9 stripper-type wells are going to be operated at lower 10 pressure, so -- and lower throughput to the tank, so I 11 think it's safe to assume that the emissions from those 12 wells would be -- would be less than those of the higher 13 producing, higher pressure-type wells. 14 CHAIRPERSON SUINA: Okay. So just -- again, just 15 so I have it, so you're saying that those conventional 16 wells probably emit less? 17 MR. DAVIS: Correct. 18 CHAIRPERSON SUINA: Okay. All right. Thank you 19 so much. I appreciate that and thank you so much for your 20 testimony. 21 MR. DAVIS: Thank you. 22 HEARING OFFICER ORTH: Thank you, Madam Chair. 23 Vice-Chair Trujillo-Davis, do you have questions of 24 Mr. Davis? 25 VICE-CHAIR TRUJILLO-DAVIS: I do. Thank you.

937 1 Can you hear me okay? 2 MR. DAVIS: Yes, ma'am. 3 VICE-CHAIR TRUJILLO-DAVIS: Okay. Great. Thank 4 you, Mr. Davis, for your testimony. I have to agree with 5 you on the point, after listening to your testimony, that 6 I would think that Merrion Oil and Gas would be a small 7 business based on your explanation of them, so I do find 8 that point kind of interesting. And I wanted to kind of 9 flesh out your -- your statements about the well-by-well 10 examination when you're looking at costs per well for 11 implementation of the rule. 12 And it seems as we've gone through this day, and 13 a lot of the testimony, that there's a perception that 14 there's a big pot of money as far as profit, and then that 15 profit is -- could easily be distributed back to the wells 16 evenly for implementation of the rule. Is that the way 17 you understand that it is being presented? Because that's 18 the way I'm understanding it. 19 MR. DAVIS: Yeah, I would say that's my 20 perception of the discussions that have taken place. And 21 that's one thing that I was trying to illustrate there, 22 that that is not the way that we do business. We run 23 economics on the individual wells. And so, you know, that 24 well's future revenue or cash flow needs to support the 25 expenditure that we're going to make. If not, then we	939 1 you know, they -- they have a business around operating 2 stripper wells. You know, they're sometimes intermixed 3 with the term marginal wells, so their margin is much 4 lower, but smaller companies with lower overhead are able 5 to continue to operate those and -- and be profitable at 6 doing so. It's just the margins associated with that 7 are -- are lower. 8 VICE-CHAIR TRUJILLO-DAVIS: Okay. Thank you for 9 that. That's insightful. And I did note that you 10 didn't -- or I'm sorry -- IPANM did not submit a proposal 11 for the language change to this portion of the rule, but 12 you did mention Colorado and Pennsylvania's kind of take 13 on this portion of it. 14 And maybe you can't answer this question, but if 15 you-all had made a recommendation, is there one of those 16 states or a combination of those that you would have 17 recommended? 18 MR. DAVIS: Yeah, it's kind of a long answer, but 19 I would say I like Pennsylvania's approach and where they 20 separate the two, you know, the conventional versus 21 unconventional. 22 Colorado tends to have more of a 23 provision-specific relief in terms of low producers, and 24 that is something that we proposed in pneumatics, was 25 following a similar approach that Colorado had, in terms
938 1 would plug and abandon and reclaim the site if the future 2 revenue doesn't justify the investment on that asset. 3 VICE-CHAIR TRUJILLO-DAVIS: So if an individual 4 well cannot support the cost of the rule implementation, 5 then it's likely that you'll just plug and abandon it? 6 MR. DAVIS: That's correct. 7 VICE-CHAIR TRUJILLO-DAVIS: Okay. So that's 8 where you were making the statement -- and I have so many 9 notes here, I don't seem to see it, but I think you were 10 making a statement along the lines of early abandonment of 11 some of these wells. So that's where you were getting 12 that from? 13 MR. DAVIS: Yes, ma'am. A lot of these stripper 14 wells or legacy-type producers are at the end of their 15 decline, so they're relatively flat. There's quite a bit 16 of reserves to be recovered over, you know, many years, 17 and so I was referring to the premature abandonment of 18 those. There's still recoverable reverses associated with 19 those wells, but in an instance where the cost of 20 compliance overburdens those wells, we would prematurely 21 plug and abandon and leave that resource in the ground. 22 VICE-CHAIR TRUJILLO-DAVIS: Do you think that 23 stripper wells are worth operating if they're toward the 24 end of their life? 25 MR. DAVIS: There are many, many companies that,	940 1 of providing relief for folks that operate low-producing 2 wells. And our original approach was supporting NMOGA's 3 position in striking the small business provision and 4 definition, because we didn't feel like it provided the 5 necessary relief. 6 VICE-CHAIR TRUJILLO-DAVIS: Okay. Thank you 7 again, Mr. Davis. I don't have any more questions. 8 HEARING OFFICER ORTH: Thank you, Vice-Chair. 9 Member Cates, do you have questions? 10 BOARD MEMBER CATES: No questions here. Thank 11 you. 12 HEARING OFFICER ORTH: Thank you. Member Bitzer, 13 do you have questions? 14 BOARD MEMBER BITZER: No questions. Thank you . 15 HEARING OFFICER ORTH: Thank you. Member Garcia? 16 BOARD MEMBER GARCIA: Yes, I just have a couple 17 of questions. You mentioned that you wanted the exemption 18 put back in for stripper wells. Do you have -- do you 19 have a ballpark figure of how much -- what percentage of 20 the wells in New Mexico are stripper wells -- would be 21 classified as stripper wells? 22 MR. DAVIS: I've looked at that in the past. I 23 believe by well count, there's 30-, 31,000 stripper wells 24 and 39 nonstripper -- or sorry, that's a percentage -- a 25 little over 19,000 nonstripper wells, and that's 61

941 1 percent and 39 percent. 2 BOARD MEMBER GARCIA: All right. And then one 3 other question is, I believe in Ms. Kuehn's testimony, she 4 mentioned that the small business exemption would be about 5 15 percent of the total number of companies, which 6 represents about 82 companies. That would be with the ten 7 employees limit, so it sounds like you-all are suggesting 8 50 employees be the limit instead of ten. 9 And do you know how many more companies would be 10 included in that exemption? Do you have an idea if it 11 were 50? 12 MR. DAVIS: I do not. That was one part of the 13 analysis that I was unable to follow from the Department's 14 standpoint. And that's one of the reasons that I just 15 made the general reference to the Small Business Relief 16 Act, because I wasn't sure how they determined the ten 17 employee cut-off, and so I do not know what that would 18 look like if you raised it to 50. 19 BOARD MEMBER GARCIA: Thank you very much. 20 That's all I have. . 21 HEARING OFFICER ORTH: Thank you. Member Honker, 22 do you have questions of Mr. Davis? 23 MEMBER HONKER: Member Garcia asked my question, 24 so I have no questions. Thank you. 25 HEARING OFFICER ORTH: All right. Thank you,	943 1 MR. ROSE: I have no questions of this witness, 2 Madam Hearing Officer. That -- that completes our 3 testimony and I assume he can be excused until the next 4 time he has to testify. 5 HEARING OFFICER ORTH: Yes. 6 MR. ROSE: Which, hopefully, will be sometime 7 this week, but we'll see. 8 HEARING OFFICER ORTH: All right. Thank you very 9 much, Mr. Davis, for your testimony, and thank you, 10 Mr. Rose. 11 So let's see. I did note that Mr. Hernandez 12 actually joined us. I hadn't, you know, wanted to 13 necessarily go to another witness unless the Board and 14 court reporter were willing. 15 Mr. Johnson, could you tell us whether maybe 16 Mr. Hernandez's presentation would be a lengthy one. 17 MS. KATZ: Madam Hearing Officer, sorry. We 18 still have surrebuttal from Ms. Day and Mr. Palmer and 19 Ms. Kuehn. 20 HEARING OFFICER ORTH: Oh, I'm very sorry. We 21 did need to loop back to Ms. Day. 22 MS. KATZ: Yes. 23 HEARING OFFICER ORTH: I'm sorry, Mr. Johnson. 24 And sorry to Mr. Hernandez if he had hoped to speak today. 25 Ms. Katz?
942 1 Madam Chair, we're coming back to you. 2 CHAIRPERSON SUINA: Thank you, Madam Hearing 3 Officer. I just have one follow-up question to 4 Vice-Chair's line of questioning. So can you just remind 5 me why -- why IPANM did not propose additional language 6 that -- that, you know, for -- related to either the 7 Colorado or the Pennsylvania regarding small business, and 8 the separation between conventional and unconventional? 9 MR. DAVIS: So I think it would be difficult in 10 this context to separate the two, just in the way that 11 this regulation is set up. And -- and we felt like the 12 original preproposal language or structure accomplished 13 that same goal, in terms of -- of moving, you know, back 14 to a well's production or potential to emit. We had 15 engaged with the Department, and they had indicated they 16 wanted some feedback, but it seemed to be within the 17 context of their structure, which we found just very 18 difficult to be able to -- to provide any feedback there 19 or to make that workable. So that's one of the reasons 20 that we did not provide those changes there. 21 CHAIRPERSON SUINA: Great. Thank you for that 22 clarification. 23 HEARING OFFICER ORTH: All right. Thank you, 24 Madam Chair. 25 Mr. Rose?	944 1 MS. KATZ: Thank you. The Department calls back 2 Susan Day, Brian Palmer and Elizabeth Bisbey-Kuehn. So 3 I'll start with Ms. Day, who is being quite the trooper. 4 SUSAN DAY, ELIZABETH BISBEY-KUEHN AND BRIAN PALMER 5 having been previously duly sworn, were recalled, 6 examined and testified as follows: 7 SURREBUTTAL EXAMINATION OF SUSAN DAY, 8 ELIZABETH BISBEY-KUEHN AND BRIAN PALMER 9 BY MS. KATZ: 10 MS. KATZ: Ms. Day, can you summaries the issues 11 raised in the direct testimony and rebuttal on the small 12 business definition from the other parties? 13 MS. DAY: Yes. In their direct testimony, both 14 NMOGA and IPANM proposes to remove section 20.2.50.125 in 15 its entirety. And both parties stated that they were 16 unaware of any companies in New Mexico that would meet the 17 thresholds in the definition of small business facility in 18 Section 20.2.50.7. 19 IPANM also stated its preference that NMED 20 restate -- sorry, reinstate the exemptions for 21 low-producing and low-PTE facilities, as proposed in the 22 prepetition draft rule that NMED released for public input 23 in July of 2020. In their rebuttal, IPA -- IPANM 24 recognized the Department's efforts to provide appropriate 25 relief for small businesses and prevent the premature

945 1 abandonment of marginal wells. They also acknowledge that 2 the small business definition may provide relief, but only 3 for very small operators. 4 Their concern is that an operator could find 5 itself qualifying as a small business one year and not the 6 next due to the uncertainty in commodity prices. 7 Additionally, they state that the NMED analysis for the 8 small business facility threshold only considered 9 operators with wells that overall on average, could not 10 support the cost of compliance. 11 Finally, they restate their preference that NMED 12 reinstate the exemptions for low-producing and low-PTE 13 facilities as proposed in the prepetition draft rule that 14 NMED releases for public input in July of 2020. 15 On page 4 of his rebuttal, Ryan Davis of IPANM 16 states -- says that well production and PTE are better 17 measures to ensure the necessary relief, but does not 18 recommend specific limits. In response to that, I'd just 19 like to point out that the rule has PTE limits for many of 20 the sections, and those limits in some cases were revised 21 based on industry testimony. 22 I'd also point out that no production limits were 23 recommended by IPANM or NMOGA. On page 6 of his rebuttal, 24 Ryan Davis appears to be recommending that the Board 25 consider a small business definition of 50 or less	947 1 economic fluctuations. Not even considering commodity 2 prices, production can also be variable. Moreover, for 3 federal rulemaking, it's standard practice to pick a 4 snapshot of conditions in the regulated industry or 5 industries when estimating compliance costs and small 6 business impacts. 7 MS. KATZ: Thank you. Ms. Kuehn, are there 8 examples of statutes and regulations that use small 9 business definitions based on revenue and employment? 10 MS. BISBEY-KUEHN: I'm sorry. That's what I 11 discussed in my previous testimony, that both the Clean 12 Air Act and New Mexico's Construction Permit Fee 13 Regulation do contain definitions of small business and 14 both definitions contain an employee threshold and an air 15 pollutant threshold to qualify. These definitions are 16 used in compliance assistance and a reduction in the 17 permit fees. 18 MS. KATZ: Okay. Thank you. 19 Mr. Palmer, can you respond to Mr. Davis's 20 testimony that NMED's proposed threshold for small 21 business facility did not account for the cost of 22 pneumatics? 23 MR. PALMER: Yes. Mr. Davis is correct that 24 those costs were not included in the estimated cost per 25 operator in the example facility that Ms. Kuehn described
946 1 employees based on the New Mexico statutes -- excuse me -- 2 then he cites in his testimony. Specifically, definition 3 E reads "small business means a business entity, including 4 its affiliates that is independently owned and operated 5 and employs 50 or fewer full-time employees." 6 We did an analysis of the 50 employee or less 7 definition, and found that 324 of the global ultimate 8 parent companies that had revenue employment and well 9 production data in our analysis, of those, 274 global 10 ultimate parent or 85 percent would have less than 50 11 employees. And this 85 percent of global ultimate parent 12 companies were associated with about 19,000 wells, or 13 about 40 percent of the wells in the analysis, and 14 represents 4.7 billion dollars in oil and gas value, or 15 about 28 percent of the value of the wells in the 16 analysis. 17 And this is -- this is really the same 18 unacceptable impact as the stripper well exemption. 19 MS. KATZ: Thank you. And Ms. Day, what is your 20 response to IPANM's concerns that operators could move in 21 and out of qualifying as a small business from one year to 22 the next due to uncertainty in commodity prices? 23 MS. DAY: In the context of this rulemaking, it's 24 appropriate to take a snapshot of the industry to profile 25 the affected universe. There are always going to be	948 1 earlier. If you look at the data that are included in 2 exhibit -- NMED'S Exhibit 095, which is our pneumatics 3 cost spreadsheet, you can look at that in the Permian 4 Basin on a per-well basis, the annual cost would be about 5 \$460 at a site with electricity, or \$850 at a site without 6 electricity. In the San Juan Basin, the cost per well 7 would be about \$2,300 dollars at site with electricity, 8 and the annual cost to the well per well at a site without 9 electricity would be about \$4,200. 10 And we'll get into those costs, I'm sure, a lot 11 more when we talk about the pneumatics section of the 12 rule, but that's just it for an order of mag, just to give 13 the Board some sense of what those costs would be. 14 MS. KATZ: And so, did you do any estimates with 15 those costs? 16 MR. PALMER: Yeah, it would change the -- it 17 would change the cost from -- of the example facility, on 18 average, by about \$2,000 per facility. So probably from 19 about \$38,000 per facility, to probably about 40-, \$42,000 20 per facility. 21 MS. KATZ: Okay. And how many companies would 22 that change -- that estimated change affect with -- 23 (unintelligible.) 24 MR. PALMER: I think it would move the number of 25 facilities on that revenue threshold analysis by only two

949 1 or three facilities, based on the data that we have in the 2 spreadsheet. 3 MS. KATZ: Okay. Thank you. That's all I have. 4 HEARING OFFICER ORTH: All right. Thank you, 5 Ms. Katz, Mr. Palmer and Ms. Kuehn, Ms. Day. 6 Ms. Fox, do you have questions of this panel? 7 MS. FOX: No. Thank you, Madam Hearing Officer. 8 HEARING OFFICER ORTH: Ms. Paranhos? 9 MS. PARANHOS: No questions, Madam Hearing 10 Officer. 11 HEARING OFFICER ORTH: Thank you. Mr. Johnson? 12 PROFESSOR PACYNIK: No questions from CCP and 13 NAVAEP, Madam Hearing Officer. 14 HEARING OFFICER ORTH: And that was Professor 15 Pacyniak. All right. Thank you. 16 I don't believe we have Ms. Devore with us. 17 Mr. Nykiel? 18 MR. NYKIEL: No questions. Thank you. 19 HEARING OFFICER ORTH: Thank you. Mr. De 20 Saillan? He may have stepped away. Mr. Hiser? 21 MR. HISER: No questions, but with thanks to our 22 London correspondent for staying up through this. 23 HEARING OFFICER ORTH: Yes. Mr. Rose? 24 MR. ROSE: No questions, but I'll engage 25 Mr. Palmer perhaps later on pneumatics, later this week.	951 1 EXAMINATION BY THE BOARD OF SUSAN DAY, 2 ELIZABETH BISBEY-KUEHN AND BRIAN PALMER 3 HEARING OFFICER ORTH: Madam Chair, do you have 4 questions of this panel? 5 CHAIRPERSON SUINA: I have no questions at this 6 time. Thank you, Madam Hearing Officer. 7 HEARING OFFICER ORTH: Thank you. Vice-Chair 8 Trujillo-Davis, any questions? 9 VICE-CHAIR TRUJILLO-DAVIS: I have a couple of 10 questions, and I apologize if I'm asking the same thing. 11 I realize that at this time in the day, my brain and all 12 of these numbers flying across, are starting to mesh. 13 So the 50 employees per -- or we were talking 14 about the smalls business cut-off, 50 employees versus 10 15 employees. I think the question is for Ms. Day. Is that 16 50, when you -- when you applied the constraint of 50 17 employees, was that 50 employees and a \$250,000 revenue, 18 or was that 50 employees and based on an average revenue 19 of what a company with 50 employees would make? 20 MS. DAY: I was just looking at the revenue data 21 reported in Dunn & Bradstreet for the global ultimate 22 parents in the analysis, that actually had revenue, 23 employment and well production data. So it's just -- it's 24 just those qualifying global ultimate parents over-arrayed 25 by their employment data, and then counting the number
950 1 Hopefully not later today. 2 HEARING OFFICER ORTH: All right. 3 MR. ROSE: So I think he was correct, that that's 4 where that debate will happen. 5 HEARING OFFICER ORTH: All right. Thank you. 6 Mr. Janoe said he didn't have any questions. Mr. Butzier? 7 MR. BUTZIER: Madam Hearing Officer, the only 8 question I have is for you, which is, are we going to hear 9 from Smitherman on this subject or no? 10 HEARING OFFICER ORTH: Mr. Hiser? 11 MR. HISER: I would be -- given the late hour, 12 I'd be happy to chat with my client and see if we have 13 anything to say about it, and then maybe we'd just touch 14 on it tomorrow. It's very brief. 15 HEARING OFFICER ORTH: All right. Let me finish 16 with the round of questioners here. Ms. Gutierrez? 17 MS. GUTIERREZ: No questions. 18 HEARING OFFICER ORTH: Thank you. Let's see. 19 Mr. Colclasure? 20 MR. COLCLASURE: No questions. Thank you. 21 HEARING OFFICER ORTH: And Ms. Witherspoon? No. 22 All right. 23 I'm going to turn to the Board. In the event you 24 are an attendee and have a question, please reach out 25 through the Chat.	952 1 that have 50 or fewer employees. 2 VICE-CHAIR TRUJILLO-DAVIS: Okay. And I think 3 you said the number didn't change drastically from 10 to 4 50 employees, and how many businesses were able to 5 qualify? 6 MS. DAY: I did not say that. I believe that 7 there was -- that Mr. Palmer might have been talking about 8 there being not much difference when he included the cost 9 of the pneumatics. 10 VICE-CHAIR TRUJILLO-DAVIS: Okay. So maybe 11 that's a better question. Does the number of qualifying 12 businesses change drastically when you look at 10 versus 13 50? 14 MS. DAY: The -- the number of global ultimate 15 parents that are less than ten -- have less than ten 16 employees -- ten or less employees, is just one part of 17 the small business facility definition. It also has that 18 \$250,000 revenue threshold. So that -- the number that 19 has been raised by Ms. Kuehn included both of those 20 pieces. The number that I talked about was -- was not 21 looking at a revenue threshold in addition to employment 22 threshold. 23 VICE-CHAIR TRUJILLO-DAVIS: Okay. Okay. Thank 24 you for clarifying that. And I'm switching subjects a 25 little over -- yeah, subjects a little bit here.

953 1 But Mr. Palmer, I think you said that the cost of 2 per well was up to \$4,400 per well for implementation. 3 Did I get that correct? 4 MR. PALMER: That is -- that is the average cost 5 to retrofit pneumatics per well in the San Juan Basin at a 6 site without electricity. 7 VICE-CHAIR TRUJILLO-DAVIS: Okay. I have to 8 admit, given my experience, that number seems kind of low. 9 So I'm just curious what that includes. Is that just 10 parts and installation, mileage? 11 MR. PALMER: Let me clarify; that is the 12 annualized cost. So that's not the -- that's not the -- 13 that's not the total cost. That is just the annualized 14 cost. 15 VICE-CHAIR TRUJILLO-DAVIS: Okay. Could you 16 explain that a little further? 17 MR. PALMER: The annualized versus the total 18 cost? 19 VICE-CHAIR TRUJILLO-DAVIS: Yeah. 20 MS. DAY: We went back and forth on this, too. 21 MR. PALMER: I know. Yes, when we talk about the 22 economics and there will be -- 23 MS. KATZ: Yeah. 24 MR. PALMER: Pneumatics will be a huge -- I'm 25 sure, a big subject of testimony later, and so --	955 1 much. Thank you, all of you. So this panel for this 2 topic is done. And Ms. Day, I hope you're able to get 3 some rest. 4 MS. DAY: Thank you. 5 HEARING OFFICER ORTH: Thank you. Let's bring -- 6 let's see -- was it Mr. Hiser back on? 7 MR. HISER: Yes, Madam Hearing Officer. 8 HEARING OFFICER ORTH: For a discussion of 9 whether it would be a good time to bring on 10 Mr. Smitherman. 11 MR. HISER: We certainly can. Our position is 12 more or less the same as what you heard from IPA, but it's 13 after -- it's after 6, I don't know if you wanted to 14 continue or not. 15 HEARING OFFICER ORTH: Right. No, I'm not 16 insisting, just -- just wondering. 17 Then, can we take a few moments, please, just to 18 discuss the schedule for tomorrow? We don't have a lot of 19 public comment at 9 a.m. We do have some, but not a lot. 20 And then my memory is, we can certainly go to 21 Mr. Smitherman, and then we were going to go to -- was it 22 ozone attainment and then the engines and turbines? 23 MR. HISER: I believe that we have a modeling 24 expert yet from EDF that we need to cover. 25 HEARING OFFICER ORTH: That was Thompson?
954 1 MS. KATZ: Yes. I was going to suggest Madam 2 Trujillo -- Member Trujillo-Davis, that those costs and 3 all of the pneumatics stuff are going to be very 4 extensively covered, and so maybe that could be targeted 5 at that time, just to not go down that rabbit hole 6 tonight. 7 VICE-CHAIR TRUJILLO-DAVIS: No, that's fair. 8 Thank you. Yes, thank you for indulging my questions 9 there. I don't have any more. 10 HEARING OFFICER ORTH: All right. Thank you. 11 Member Cates? 12 BOARD MEMBER CATES: No questions here. Thank 13 you. 14 HEARING OFFICER ORTH: Member Bitzer? 15 BOARD MEMBER BITZER: No questions. Thank you. 16 HEARING OFFICER ORTH: Thank you. Member Garcia? 17 BOARD MEMBER GARCIA: No questions. Thank you. 18 HEARING OFFICER ORTH: Thank you. And Member 19 Honker? 20 BOARD MEMBER HONKER: No questions. Thank you. 21 HEARING OFFICER ORTH: Thank you. Ms. Katz, did 22 any of the questioning prompt redirect for you? 23 MS. KATZ: No, I think we can leave it there. 24 Thank you, Madam Hearing Officer. 25 HEARING OFFICER ORTH: All right. Thank you very	956 1 MR. HISER: Yes. 2 HEARING OFFICER ORTH: Okay. That's right. 3 MS. KATZ: We have already done Ozone Attainment 4 Initiative. 5 HEARING OFFICER ORTH: I'm sorry. Excuse me. So 6 we were going to engines and turbines? 7 MR. HISER: I think it would be general 8 provisions and definitions next. 9 MS. KATZ: Yes, definitions -- sorry. Yeah, 10 Topic 21, definitions; and then Topic 22, which is general 11 provisions -- or sorry, applicability; Topic 23, which is 12 general provisions; and then 24, which is engines. 13 HEARING OFFICER ORTH: All right. So we have a 14 little ways to go before we get to engines and turbines. 15 I just got overly excited. All right. 16 So is that sufficiently clear for the Board 17 members for your preparation for tomorrow? We'll hear 18 some public comments, briefly from Mr. Smitherman, from 19 Thompson, and then going to Topics 21, 22, 23 and then the 20 big one is 24. 21 MR. HISER: I do see Ms. Paranhos and I don't 22 know if she perhaps has a concern for her witness's 23 availability. 24 MS. PARANHOS: Just on the screen, just because 25 you did mention Dr. Thompson earlier, but I think we're

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1 clear now that she'll go after Mr. Smitherman tomorrow, so
2 that's terrific.

3 HEARING OFFICER ORTH: All right. Great. And
4 that will be fairly early in the morning.

5 Well, if that's all for today, thank you all very
6 much. And we'll see you tomorrow morning at 9.

7 (Proceedings adjourned on September 22, 2021, at
8 6:04 p.m.)

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1 STATE OF NEW MEXICO
2 BEFORE THE NEW MEXICO ENVIRONMENTAL IMPROVEMENT BOARD
3 PROPOSED ADOPTION OF RULE 21-27 NMAC
4 RULES HEARING

5

6 REPORTER'S CERTIFICATE

7 I, THERESA E. DUBOIS, RPR, CSR #29, DO HEREBY
8 CERTIFY that on September 22nd, 2021, the Public Hearing
9 of the New Mexico Environmental Improvement Board was
10 taken before me, that I did report in stenographic
11 shorthand the Proceedings set forth herein, and the
12 foregoing pages are a true and correct transcription to
13 the best of my ability.

14 I FURTHER CERTIFY that I am neither employed by
15 nor related to nor contracted with (unless excepted by the
16 rules) any of the parties or attorneys in this matter, and
17 that I have no interest whatsoever in the final
18 disposition of this matter.

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THERESA E. DUBOIS, RPR

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