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JUDGE: Good afternoon. It's January 16th, 2020. I've got about almost 1:00 p.m. straight up, and we're in Sunset Hills, Missouri.

The Missouri Public Service Commission has set this time for a local public hearing in file No.: ER-2019-0335, which is captioned as In The Matter Of Union Electric Company doing business as Ameren Missouri's Tariffs To Decrease its Revenues For Electric Service.

My name is Paul Graham. I'm the regulatory law judge that will preside over this hearing. With me today is Commissioner Maida Coleman on my right, and Commissioner Scott Rupp on my left.

Do either one of you, the Commissioners, wish to make any kind of opening statement or opening remarks? COMMISSIONER COLEMAN: Only to apologize that we evidently have no juice up here in our microphones, so hopefully, you will be able to hear us clearly tonight.

JUDGE: Thank you.
COMMISSIONER COLEMAN: And thank you for being here.

JUDGE: Thank you. I'm going to begin by asking counsel to enter their appearance for the record. Ameren, Missouri? Okay. No counsel.

MS. JOHNSON: I'm sorry, Judge. Paula Johnson on behalf of Union Electric Company d/b/a Ameren Missouri. 1901 Chouteau, St. Louis, Missouri, 63103. Thank you, and I'll be quicker next time.

JUDGE: Thank you very much.
Commission staff?
MR. PRINGLE: Travis Pringle for commission staff, Your Honor.

JUDGE: Thank you. Is anyone here for the Office of Public Counsel?

MR. HALL: Yes, Judge. Thank you. Caleb Hall appearing on behalf of the Office of Public Counsel. I previously provided my contact information to the stenographer.

JUDGE: Thank you very much. Any interveners present today? Anyone who has intervened in the case?

For those who would like to provide comments today, I am going to call the names listed on the sign-up sheet in the order they appear. When I call your name, please come down to the podium. I am going to place you under oath and ask you to state and then to spell your name, and then you can offer your

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comments to the Commission.
Looking at this sign-up sheet, there's possibly a number of people who are going to testify. There's no specific time limit, but please try to keep your remarks to five minutes so everyone has to chance here to offer comments. Also, please remain after you've completed your testimony at the podium until you've been excused by me because the Commission may have some questions to ask you. If the attorneys have any questions, they can let me know at that time as well.

Now, we at the bench, the Commission, will not be able to answer any of your questions today because they, the Commissioners here, have to remain impartial until after the evidence is presented at the evidentiary hearing. If you have any questions, please speak to the representatives of the company, the Commission staff or the Office of Public Counsel; and also, and I'm sure you will, please be polite and courteous to everyone speaking here today and treat them the same way you would like to be treated.

So we're going to proceed now with testimony, and help many me if \(I\) don't get your names right. Andy Knott, \(\mathrm{K}-\mathrm{n}-\mathrm{o}-\mathrm{t}-\mathrm{t}\). Am I close to right?

MR. KNOTT: That's correct, sir.
JUDGE: All right. If you'll step up, I'll
swear you in. If you'll raise your right hand, I'm going to ask you, as indicated, to state your full name and spell it for me, please.

MR. KNOTT: Sure, it's Andy Knot, A-n-d-y \(\mathrm{K}-\mathrm{n}-\mathrm{o}-\mathrm{t}-\mathrm{t}\).
(The witness was sworn.)
MR. KNOTT: Thank you members of the Commission and Judge for this opportunity.

My name's Andy Knott. I am providing a comment today as a rate payer of Ameren's. I live in Shrewsbury Missouri. I want to comment on some of the issues is that we heard about in the \(Q\) and \(A\) session relating to some of the costs of coal.

Last fall, a federal judge ordered Ameren to install significant pollution controls at the Rush Island and the Labadie coal plants. That followed a 2017 ruling by the same judge that found Ameren was liable for violations of the Clean Air Act at the Rush Island plant, and in the judge's order from last fall, he cited an expert witness who testified -- provided testimony that the violations at the Rush Island Plant, over a nine-year period, had contributed to as many as 800 premature deaths in the region.

My point is that there are certainly health costs relating to coal plants that get passed on to the
community, but there are also economic costs. I know that from testimony submitted into this docket by the Sierra Club, that an expert there found that an estimated \(\$ 347\) million were spent by Ameren more than it would have cost to buy energy off the grid between 2016 and 2018. So coal is expensive, and the cost of wind and solar continue to drop.

The last study by the company Lazard, every year they issue a levelized cost of energy analysis. Their last analysis that came out in November of last year found, again, that wind and solar are continuing to drop down, to wind is about \(\$ 28--\) as low as \(\$ 28\) a megawatt hour, and solar is -- utility scale solar as low as \(\$ 32\) a megawatt hour. This is a national average. These are actually even cheaper than gas combined cycle in most cases.

So my point is that coal is expensive. These costs are passed onto customers. It's only going to get more expensive as new environmental compliance measures are required, including the judge's order on Rush Island and Labadie from last year. So my request to the Public Service Commission is that you required Ameren to provide a retirement analysis of its coal plants prior to any future costs that would get passed on to the customers. Thank you.

JUDGE: Thank you, Mr. Knott. Don't just leave yet.

Does Ameren Missouri have any questions for this witness?

MS. JOHNSON: No, Your Honor.
JUDGE: Commission staff?
MR. PRINGLE: No, Your Honor.
JUDGE: Office of Public Counsel?
MR. HALL: None, Judge.
JUDGE: Do either Commissioner have questions?
COMMISSIONER COLEMAN: No.
COMMISSIONER RUPP: No.
JUDGE: Thank you very much, Mr. Knott. You may be seated.

Witness Edward -- and again, help me with names -Bayham? There you are, coming straight at me.

Mr. Bayham, if you would state your full name and spell it, then I'll swear you in.

MR. BAYHAM: Edward, E-d-w-a-r-d, Bayham
\(B-a-y-h-a-m\).
JUDGE: Okay, Mr. Bayham, raise your right hand, please.
(The witness was sworn.)
MR. BAYHAM: Thank you. Thank you for the opportunity to make some comments. I am a resident of

St. Louis County and a rate payer. I know that Ameren has aspirations to become a source of energy innovation and efficiency. After all, they have partnered with UMSL and with Capital Innovators to fund energy innovation. This past November they showcased energy innovation companies at Ameren Accelerator Demo Day, and it's very impressive to see what possibilities there are with technologies and and innovation to reduce cost, et cetera. My question is whether this is a bona fide effort on the part of Ameren or just a PR ploy.

This hearing is due to their effort to force a regressive tax on the customers so that they continue to operate inefficiently with polluting power plants. I am concerned that their delays in switching to alternative, cheaper energy sources will only increase the ultimate cost to deactivate coal burning plants and to clean up the toxic waist dumps. In effect, they are defending the status quo, not innovating for the 21 st century. JUDGE: Does that conclude your testimony? MR. BAYHAM: Yes. JUDGE: Thank you very much.

Does Ameren Missouri have any questions for Mr. Bayham?

MS. JOHNSON: No, Your Honor.
JUDGE: Does The Staff?

MR. PRINGLE: No, Judge.
JUDGE: Office of Public Counsel?
MR. HALL: No, Your Honor.
JUDGE: Does The Commission have questions?
COMMISSIONER COLEMAN: No.
COMMISSIONER RUPP: No.
JUDGE: Thank you very much for your testimony today, Mr. Bayham. You may be seated.

And the next witness I have is Jamie Gilley.
MS. GILLEY: That is correct.
JUDGE: Did I get it right? Please come on
up. And would you state your full name and spell it for us.

MS. GILLEY: Jamie Gilley, J-a-m-i-e
G-i-l-l-e-y.
JUDGE: Thank you. If you'll raise your right
hand, and we'll swear you in.
(The witness was sworn.)
MS. GILLEY: Thank you for your service.
I would like to ask the Public Service Commission to require Ameren to study the retirement of the coal plants before future costs at those plants are passed on to customers. I would like to ask that you reject Ameren's \$2 increase in the monthly customer charge. This increase hurts low-income rate payers the most and

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discourages energy conservation because customers pay no matter how little electricity they use.

Ameren should, instead, be required to offer customer rates that incentivize energy efficiency in shifting usage away from the most expensive times of the day.

I would also like to ask that Ameren drop its appeal of the September 2019 court ruling, comply with the Clean Air Act and reduce air pollution that is causing hundreds of premature deaths, to stop wasting customer money and plan to phase out its expensive, dirty plants as soon as possible. Ameren should replace expensive, dirty coal with energy efficiency, battery storage and renewable energy from the wind and sun. I would like to see them set an example as a leader in clean, renewable energy in the midwest and not trail behind. We would like to see Ameren stop sending hundreds of millions of dollars out of state, coal mining -- to coal mining companies every year and keep that money in Missouri instead of investing -instead by investing in clean energy.

And that's all I have. Thank you.
JUDGE: Thanks, Ms. Gilley.
Does Ameren Missouri have any questions for
Ms. Gilly?

MS. JOHNSON: No, Your Honor.
JUDGE: The staff?
MR. PRINGLE: No, Your Honor.
JUDGE: Office of Public Counsel?
MR. HALL: None, Your Honor.
JUDGE: Commissioners?
COMMISSIONER COLEMAN: No.
COMMISSIONER RUPP: No.
JUDGE: Thank you very much for your
testimony, Ms. Gilley. You may be seated.
Next witness \(I\) have on the list is Helen Host.
DR. HOST: Thank you.
JUDGE: Am I saying your name right?
DR. HOST: Yes, Host.
JUDGE: Would you state your name and spell it
for the record.
DR. HOST: Helen, H-e-l-e-n. Host, H-o-s-t.
I'm a physical therapist with a Ph.D. in applied physiology --

JUDGE: Well, let me have you say that under oath. May I?

DR. HOST: Sure.
JUDGE: If you raise your right hand, I'll swear you in.

DR. HOST: Sorry about that.
(The witness was sworn.)
JUDGE: Again, tell us who you are now under
oath.
DR. HOST: Sure, my name is Dr. Helen Host. I'm a physical therapist with a degree in applied physiology. I've been practicing in healthcare and doing research for most of that time since '93 in working with older adults in optimizing function in older adults mainly at Washington University, but also teaching at Maryville University as well and speaking at national meetings and doing all kinds of things all over.

I'm active with the chapter here, the St. Louis chapter of the Sierra Club, locally, but became a more active participant in working with environmental action since fall of 2018.

I'm a volunteer member with Citizens Climate Lobby, so I've lobbied the past two Novembers in Washington D.C. working with members of congress in an efforts to pass and work in a bipartisan approach to tackle the challenges presented to us in our nation and the world with climate change.

I also do educational outreach with Climate Reality Project, basically teaching about the scientific basis and the scientific data that fully supports that our
climate is warming and it's warming rapidly, and it's getting more and more important to tackle this as an issues.

One thing I just want to bring -- and everybody that's up on this, yesterday, just yesterday, the annual report came out from National Oceanic and Atmospheric Association and NASA regarding our ever warming climate. We just passed our second hottest year ever on record. Records have been taken accurately since the late 1800s, and we've actually just passed the wonderful record of the hottest decade ever recorded as of yesterday.

So I think that kind of brings background to my reason for being here. I teach about this and I know that Missouri, unfortunately, we have the bad reputation of being the third state in the nation -after Texas, No. 1, and Indiana is No. 2 -- as far as, we get our energy from coal. One of the dirtiest -well, it is the dirtiest fossil fuel out there and, unfortunately, we are getting a lot of our energy from that for our state. We've heard the problems out there as well about the health, and \(I\) teach about that all the time, so it's a big issues.

My concern and my push -- actually, I wanted to bring in with hearing the gentleman talk, I appreciate all that Ameren is doing but \(I\) think we need to

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accelerate our actions and do more. I think, probably, a lot of people in here have children, have grandchildren or have children that they know, and it doesn't just have to be children but everybody is affected by this. It's in the air we breathe and then we're always pumping 110 million -- I'm going to get this -- I should have all of this in front of me, but we pump a lot of fossil fuel gases that are bad for our environment. We're pumping that into the air every day, and we can't -- we need to accelerate action on this front, so I appreciate what Ameren is doing, but \(I\) just wish they would accelerate what they're doing.

He mentioned a goal of 700 megawatts of energy. That is wonderful, but \(I\) have the top ten states in the nation, and I picked two in the top ten that are close, I think, to us. First of all, close in proximity but also close in general area and populations.

Illinois, this is what they're currently producing, and this is, actually, probably, a little bit from behind. It's from this summer of 2019. They are at production levels, right now, today, 4,464 megawatts. Remember, we're shooting, as a goal, of 700. Iowa, another nearby state, is at 7,312 megawatts. This was as of this summer. Washington, who's No. 10 in the top ten list, they're at 3,075. So
even if we get to 700, which is better than what we're doing now, it's still way below where we need to be.

There's no reason that we're not pushing faster towards solar and wind. Those are the best that we have right now. More will come, and as we incentivize people to change, this brings jobs. It's good for the economy. This is a win-win situation, and it will save so much money in the long run to have this long-sighted rather than short-sighted gains. So that would be my big thing to push more is that we need to accelerate this change. We need to work on accelerating closure of these coal-powered plants. We cannot wait until 2030 or twenty -- whatever the dates that were given. They're too far out. We need to work to accelerate these and have this happen now very close to now, if at all possible. Thank you.

JUDGE: Thank you, Dr. Host. Just a minute, if you would. Someone may want to ask you questions. DR. HOST: I'm sorry. Sorry.

JUDGE: That's all right.
Does Ameren have any questions?
MS. JOHNSON: No, Your Honor.
JUDGE: Staff?
MR. PRINGLE: No, Your Honor.
JUDGE: Office of Public Counsel?

MR. HALL: None, Judge.
JUDGE: Commissioners?

COMMISSIONER COLEMAN: No.
COMMISSIONER RUPP: No.

JUDGE: Thank you again, Dr. Host.
DR. HOST: Thank you.
JUDGE: Sharon Bertram is who I have up next. If you'll come forward, say and spell your name, I'll swear you in.

MS. BERTRAM: Sharon, S-h-a-r-o-n. Bertram, B-e-r-t-r-a-m.

JUDGE: Ms. Bertram, would you raise your right hand?
(The witness was sworn.)

MS. BERTRAM: Thank you. I want to address the rate change itself as we are charged, now, \$9 for our service fee and Ameren would like to increase that by \$2. I'm not into all the economics of that. Okay, that may be a good idea, and perhaps they need it. My concern is that perhaps in two more years we're going to need a \(\$ 4\) increase, and then where does this end or how, you know, how can this service fee be equitable and just for the people who are Ameren customers?

Now, this may be hypothetical, and this is to the best of my understanding: I'm concerned that Ameren has
the largest number of lobbyist for our state legislature. We know it's a big corporation and they employ people to present their ideas and their theories to our state legislature. So the lobbyists influence the legislators to favor their policies in one way or the other, and I don't know what that might be, but I'm going on the knowledge that \(I\) have. And someone from the Public Service Commission told me that they are not influenced by lobbyists, but the legislators in our state legislature write the bills and the legislators are influenced by the lobbyists, and so the Public Service Commission has to go by the laws that are given to them by our state legislature, and I'm just advocating that -- I don't know that the lobbyists give us the best chance at good legislation and that our state legislators give us the best chance at state legislation. Thank you.

JUDGE: Thank you, Ms. Bertram. If you you'll stay there, we'll see if there are any questions. Does Ameren Missouri have any questions for Ms. Bertram?

MS. JOHNSON: No, Your Honor.
JUDGE: Staff?
MR. PRINGLE: No, Your Honor.
JUDGE: Office of Public Counsel?

MR. HALL: None, Judge.
JUDGE: Commissioners?

COMMISSIONER COLEMAN: No.

COMMISSIONER RUPP: No.
JUDGE: Thank you very much, Ms. Bertram, for your testimony.

Cindy Gross. Ms. Gross, if you would state your full name and spell it then we'll swear you in.

MS. GROSS: Cindy, C-i-n-d-y G-r-o-s-s.
JUDGE: If you raise your right hand.
(The witness was sworn.)
MS. GROSS: So I came to comment today as a rate payer, a grandmother and the chair of my green team at my church. So our church put solar panels on about six years ago, and we feel that that is a witness to our calling to care for creation and to care for our neighbors.

And I want to reiterate many of the comments I've already heard today that our federal government is not moving fast enough, these corporations aren't moving fast enough. The City of St. Louis passed a resolution saying we wanted to move to 100 percent energy efficiency, and and as a grandmother and a mother, I feel like we need to do it faster and faster.

So I would ask the Commission to insist that

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Ameren think about closing those dirty coal plants faster than they have said they're going to do it, because they're so dirty and they harm public health and primarily disadvantaged folks in communities of color that have housing in areas that are more exposed to toxins.

And I also feel, as a retiree, that adding this fixed charge onto our bills can be tough for folks that are on fixed incomes, and they should take that into account that, you know, folks are being penalized. We should work to be more energy efficient, and they should reward that, and we are willing to pay for to support efforts to move to clean energy sources. Thank you.

JUDGE: Thank you, Ms. Gross.
Does Ameren have any questions for Ms. Gross?
MS. JOHNSON: No, Your Honor.
JUDGE: The Staff?
MR. PRINGLE: No questions, Judge.
JUDGE: Office of Public Counsel?
MR. HALL: No, thank you, Judge.
JUDGE: The Commissioners?
COMMISSIONER COLEMAN: No.
COMMISSIONER RUPP: No.
JUDGE: Thank you, Ms. Gross. You may be
seated.
Lloyd Klinedinst. Was it Klinedinst or
Klinedinst?
MR. KLINEDINST: Either one.
JUDGE: If you'll state and spell your full name.

MR. KLINEDINST: Lloyd Klinedinst.
JUDGE: That sounds like the way it's supposed to be.

MR. KLINEDINST: \(L-l-o-y-d\)
K-l-i-n-e-d-i-n-s-t.
JUDGE: Thank you, Mr. Klinedinst. If you'll raise your right hand, I'll swear you in.
(The witness was sworn.)
MR. KLINEDINST: I object to the
Ameren-proposed rate changes. I believe the fixed charges are regressive, hurting low-income taxpayers the most, and the fixed charges discourage energy conservation because customers pay no matter how little electricity they use.

I believe the rate changes compensate for what should be done, that Ameren take measures to operate more efficiently, cleaner, less expensive energy solutions. These rate changes are like rearranging deck chairs on the Titanic. The frightening reality is the
irreparable damages Ameren is wrecking on our air, land and water, and consequently, on our health and wellbeing.

I live with within a ten-mile radius of the even larger \(40-\) mile radius of the Labadie plant's so2 emissions. At my last look, this plant is always the nation's fourth largest co2 coal-fired power plant polluters. The Labadie plant also devastates our land expanding waste ponds and landfills even adjacent to wetlands and floodplains violating our barely-meeting minimum requirements.

Imagine a Missouri water network underground every bit as spectacular as our aboveground network of rivers and streams. Missouri is celebrated as karst country. Now see that underground beauty transmogrified into a sewer system delivering its deadly waste throughout our land.

Missouri Department of Natural Resources knew as early as 1992 that a 154-acre, unlined coal-ash pond at Ameren's Labadie plant, the largest coal plant in the state and 14th largest in the nation, had been leaking some 15,000 gallons of coal ash waste for per day. The same Labadie plant violates the Federal Clean Water Act with respect to hot water discharge putting wildlife in the Missouri River at risk.

I ask the Public Service Commission to, indeed, perform your public service, to benefit the people of Missouri over the profit of a virtually private interest. Thank you for accepting my statement. JUDGE: Thank you, Mr. Klinedinst.

Does Ameren Missouri have any questions for Mr. Klinedinst?

MS. JOHNSON: No, Your Honor.
JUDGE: Staff?
MR. PRINGLE: No, Your Honor.
JUDGE: Office of Public Counsel?
MR. HALL: None, Judge.
JUDGE: Commissioners?
COMMISSIONER COLEMAN: No.
COMMISSIONER RUPP: No.
JUDGE: Thank you very much, Mr. Klinedinst,
for your testimony.
COMMISSIONER COLEMAN: Thank you, sir.
JUDGE: Daniel Berg. Mr. Berg, if you'll
state your name and spell it, I'll swear you in.
DR. BERG: D-a-n-i-e-l B-e-r-g.
JUDGE: Yes, if you'll raise your right hand.
(The witness was sworn.)
DR. BERG: My name's Daniel Berg. I'm an
internal medicine physician in St. Louis at Family Care

Health Centers, and most of what \(I\) was going to say has already been said, but \(I\) want to make two comments.

The first is that we have a global climate crisis and Ameren should be doing everything they can to decrease their carbon emissions. For that reason, I do not agree with the rate change because when they increase the base fee and decrease the variable fee, it discourages people from saving energy and discourages people and businesses from using solar electricity. We should be doing everything we can to encourage those things, so it's moving in the opposite direction that we should be going.

My second comment is in response to something that Mr. Woods said earlier that running the Labadie plant is a way to provide inexpensive electricity. I challenge that assertion. The reason that it's inexpensive is because they're not paying the full cost of electricity. They're not paying for the pollution of the environment and the injury to people's health.

I've been keeping track of the cause of death of patients at our clinic for the last 11 years, and the leading causes of death have been heart disease, cancer and COPD, lung disease. It's very well established that the emissions from coal-fired power plants are significant causes of death, both heart disease and

COPD, and so -- but they are not paying that cost, so it seems like the electricity is cheap, but it's really not. Thank you.

JUDGE: Dr. Berg, thank you very much for your testimony.

Does Ameren Missouri have any questions for
Dr. Berg?
MS. JOHNSON: No, Your Honor.
JUDGE: Staff?
MR. PRINGLE: No, Your Honor.
JUDGE: Office of Public Counsel?
MR. HALL: No, your honor.
JUDGE: Commissioners?
COMMISSIONER COLEMAN: No.
COMMISSIONER RUPP: No.
JUDGE: Thank you, Dr. Berg.
COMMISSIONER COLEMAN: Thank you, Doctor.
JUDGE: John Hickey. Mr. Hickey, if you'll
state your full name then spell it.
MR. HICKEY: John Hickey, J-o-h-n H-i-c-k-e-y.
JUDGE: Mr. Hickey, if you you'll raise your right hand, I'll swear you in.
(The witness was sworn.)
MR. HICKEY: Okay. I live in St. Louis
County. I write a check to Ameren every month, so I'm
intimately aware of them. And I want to talk about two elements of this proposal that Ameren's brought to the Public Service Commission.

The first is the increased customer charge, the fixed charge, and right now it's, as I understand it, \$9 going up to \(\$ 11\) under the Ameren proposal. While that may seem small, the important factor here is the direction, and as Public Service Commissioners, you are going to be aware that there are electricity providers in this state that have monthly fixed charges of \(\$ 28\) and \$29 a month. I know, for example, Crawford Electric co-op, it's \(\$ 29\) a month fixed charge if you never use any electricity at all. And when you get to that level, which is the direction Ameren wants to go, you do discourage the customer's incentive to perform energy efficiency measures.

And I live in an old house. It's a 1915 house. It is terribly inefficient. I have spent a lot of time trying to figure out how to make if more efficient. I have used some of the Ameren subsidy programs. I've got LED lights throughout my house, and when \(I\) go buy them at Home Depot, it has the little sticker that says subsidized by Ameren, and I think, yay.

I replaced my air conditioner. Again, I got a subsidy from the Ameren efficiency program, but when \(I\)
did that, I really penciled it out to make sure I was being wise with my resources, and I know that as one increases that monthly fixed charge, the utility of using those efficiency programs goes down. So that would be my first point of the proposal in front of you-all.

And the second bit of personal experience \(I\) want to bring is I have two school-aged children who live in St. Louis County, and they pay a price for the current energy mix that Ameren has. My oldest boy is a big soccer player. If anybody is acquainted with South County and the Meramec River, you know there's a lot of soccer fields right there just up river from the Meramec Coal Plant, and \(I\) would have the -- the -- I had to bring my boy to play down there, and you can't see the coal plant from the soccer field, but if you are paying attention, you know it's just down the river and that you are having your child play in the area that's going to have a particularly high dose of sulphur dioxide because of its proximity to a coal plant that lacks sulphur dioxide scrubbers. The Meramec plant does not have scrubbers. So I think we need the Public Service Commission to look at the aspect, and the reality is, Ameren can do better.

If you look at the other two invest-your-own
utilities in this state, Empire, which is now Liberty, and KCP, which I think is now Evergy, both of those IOUs have a much higher percentage of clean energy than Ameren does. Much, much higher, and they're in the same part of the world that Ameren is. They're not necessarily smarter or faster or quicker than people in St. Louis. We should be able to meet those same levels of clean energy investment. If they're saving money for customers in Joplin, if they're saving money for customers in Kansas City, they're going to save money for customers in St. Louis, and Ameren can do better, and the other IOUs show that that is possible. Thank you.

JUDGE: Thank you very much, Mr. Hickey.
Does Ameren Missouri have any questions for Mr. Hickey?

MS. JOHNSON: No, Judge.
JUDGE: The Staff?
MR. PRINGLE: No, Your Honor.
JUDGE: Office of Public Counsel?
MR. HALL: None, Judge.
JUDGE: The Commissioners?
COMMISSIONER COLEMAN: No.
COMMISSIONER RUPP: No.
JUDGE: Thank you, Mr. Hickey for your
testimony.
Help me with this name, Patricia Schuba.
MS. SCHUBA: Yes.
JUDGE: Did I get it?
MS. SCHUBA: Yes.
JUDGE: Lucky me. If you'll state your name now for us and spell it.

MS. SCHUBA: My name is Patricia Schuba.
That's \(\mathrm{P}-\mathrm{a}-\mathrm{t}-\mathrm{r}-\mathrm{i}-\mathrm{c}-\mathrm{i}-\mathrm{a}\); Schuba, \(\mathrm{S}-\mathrm{c}-\mathrm{h}-\mathrm{u}-\mathrm{b}-\mathrm{a}\).
JUDGE: Thank you very much. If you'll raise your right hand.
(The witness was sworn.)
MS. SCHUBA: Okay. Good morning and thank you for hearing our comments today. I can say that there are many more people who would be here, and you'd hear from a lot of people if they could just be there. They're working, they're living their lives and engaged in other things. I would ask that, if it is at all possible, these rate cases in the future, that you have one near where \(I\) live because \(I\) live very close to the Labadie Power Plant. I live in Labadie, Missouri. I live about four miles from the power plant, and I think in the past, we've held hearings in Washington, Missouri, so \(I\) just ask, as an aside, that potentially, we put these hearings close to where people are most
impacted.
And I say the Labadie Plant because it's the largest in our state. It's an unscrubbed power plant, so we heard a lot during the \(Q\) and \(A\) today that they're doing everything they can, and I certainly appreciate anything they can do to clean up the air and the water near their power plants, but the reality is that only one power plant in the St. Louis area is a scrubbed power plant, and that means that it removes the toxins from the air emission from that plant. Why it's important at Labadie is because it's a huge plant. It's almost 2,400 megawatts, and \(I\) believe it is the largest in the nation without scrubbers, and that's a huge fact. It may be second, but \(I\) think it's actually first because the other power plant closed. So we're talking about a major polluter for the region. In the case against Rush Island, the Judge made the point that it's polluted and harmed people all the way to the eastern coast of this nation.

So you hold within your power to say what they can recover in costs from rate payers who don't have the choice to say, Please clean up the air. Please clean up your coal-ash ponds, and don't pass those costs on to the people that have been most impacted by that pollution.

It was referenced during the \(Q\) and \(A\) and again in someone's testimony the number of people who prematurely die from these power plants. The Labadie plant being the largest, it's hundreds of people a year that their lives are cut short. Much like Dr. Berg, I worked in healthcare for about 20 years. Worked at Vanderbilt, worked at Harvard Hospitals and home to be on the farm with my family and worked at Barnes Jewish. I can tell you that there is a larger number of people who suffer from cancers, congestive heart failure,
heart-and-lung-related diseases in the \(S t\). Louis region than there needs to be, and that's where we need regulators to step in and ask the questions and hold them accountable.

The Labadie Plant and the Ameren fleet is profitable enough to put in scrubbers and to clean up their coal-ash ponds. We only need to look over the Mississippi River to Illinois where they also operate where those are the expectations, and it's happened there that they're putting more of those things in place. They actually tested around their coal-ash ponds years before they had to under federal and state laws here in Missouri, so we shouldn't have to pay for that pollution.

We also shouldn't have to pay for a slow
progression to clean energy. I, like many other people, took advantage of the opportunities to upgrade things on our farm so I do have the largest solar array I think you can have on a residential, and we currently pay very little for energy. Now, I cannot say that my neighbor who lives in a trailer can afford to do that, so even with the 25 -cent rebate right now, many Missourians can't take advantage of that. So again, you have to look at a higher level of how a power plant, how a fleet, how a company operates in this state, and there are ways to provide incentives and opportunities to the public. One way to do that is to not charge the poor and the little old ladies living on fixed income as much per month for running a line to their home as someone else who has much more means to pay those bills.

And as was pointed out, that's not an incentive. That's an incentive to use more energy. So for example, if \(I\) was charged per gallon of water at my home versus a flat fee, what do you think would happen if I payed a flat fee? I'd suddenly want to water everything. Maybe go out and water the crops on my farm and irrigate, but when you say, Please conserve that resource, please don't pollute, you use less of those resources.

And so for all of the reasons that have been
already argued, but \(I\) just want to put an exclamation point on it, don't give them an increase on a fixed rate that gets applied across the board to every rate payer. I would argue, if you're going to do that, look at largest consumers of energy. Look at the large plants in Southeast Missouri and elsewhere that are using a lot more emergency that can afford to pay that fee if they feel like that is really what they require to stay competitive in the market.

So you're, sort of, the stopgap. What will they be allowed to do to us? And I beg you to reconsider all of those things that they're polluting, that they're not moving toward clean energy fast enough, and they are wanting to constantly come back to me who has to breathe that particulate matter and potentially drink those pollutants like arsenic in my water. I shouldn't pay for that.

In a just world, it would be the opposite. You guys would say, No, there are health costs to this and we need to consider that and provide an incentive to the company to do the right thing. So I appreciate what you're doing for us. You're listening to the public. Know there are thousands of people who stand behind me. We did a petition very early on from the Labadie Environmental Organization, I happen to be the
president of that, and there were over 2,500 signatures on that petition asking Ameren to not build a coal-ash landfill, according to regulations, in a floodplain. So they're putting a lot of material right where it's the riskiest spot to put it, and they conveniently don't say that, only a few thousand feet down the floodplain on their property, they have leaking, polluting, unlined coal-ash pits that they could put, actually, in that landfill if they wanted to, or they could have decided to put that landfill in a safer location to begin with.

So it requires regulators doing their job and maybe asking the companies to do better to get this to happen, and that's from the federal level down to the state level, and I understand that, but somebody has to start working together and get this corrected. Protect the public, make sure rates are fair and I plead you to do that for us. Thank you.

JUDGE: Thank you very much, Ms. Schuba.
Does Ameren Missouri have any questions for
Ms. Schuba?
MS. JOHNSON: No, Your Honor.
JUDGE: The staff?
MR. PRINGLE: No, Judge.
JUDGE: Office of Public Counsel?

MR. HALL: No, thank you.
JUDGE: The Commissioners?
COMMISSIONER COLEMAN: No, Judge.
COMMISSIONER RUPP: No.
JUDGE: Ms. Schuba, thank you very much for your testimony.

Next witness is Janet Crews.
Ms. Crews, if you'll state your full name and spell it, we'll take your oath.

MS. CREWS: My name a Janet Crews, C-r-e-w-s. JUDGE: Okay, Ms. Crews, if you'll raise your right hand.
(The witness was sworn.)
MS. CREWS: Okay. I am not as eloquent as all
those who are spoken before me, particularly on increasing a flat rate as proposed by Ameren, but I do want reiterate on so many of the facts that have been brought out, or opinions, by Dr. Host and Cindy Gross, that I totally would agree with, and I can firmly say that all members of my family who were not able to come have discussed this and feel the very same.

We are very concerned about the environment and believe that Ameren, again, thank you for all their plans, but they're too long-rage. We need them more immediate, and I believe any increase that the
commission might grant is just enabling them to prolong what should have been done way before this present time. So I would just please ask the Commission to consider all the facts that have been brought about the environment for those who have spoken before me, because there's so many people, as Cindy Gross said, that were unable to come here, but it's just a standing issue, and it's just too far behind, and then to say that we are so far behind other states should be an embarrassment to people who have the authority to control some of these things, like this Commission. I thank you for that consideration.

JUDGE: Thanks, Ms. Crews.
Does Ameren Missouri have questions for Ms. Crews?
MS. JOHNSON: No, Your Honor.
JUDGE: Staff?
MR. PRINGLE: No, Judge.
JUDGE: Office of Public Counsel?
MR. HALL: Just one. Ms. Crews, for the
benefit of the stenographer, does your first name have two Ns or two Ts?

MS. CREWS: No, J-a-n-e-t.
JUDGE: Thank you very much, Ms. Crews.
I have no more witnesses signed up, but is there anyone else who like would like to step forth and make a
comment?
Yes, ma'am. Come forward, and would you state your full name.

MS. SPEED: Rachel Ruth Speed.
JUDGE: And if you would spell your name, please.

MS. SPEED: It's \(S-p-e-e-d\).
JUDGE: And the first?
COMMISSIONER COLEMAN: How do you spell
Rachel?
MS. SPEED: \(\mathrm{R}-\mathrm{a}-\mathrm{c}-\mathrm{h}-\mathrm{e}-\mathrm{l}\).
JUDGE: Well, it's a good thing I asked. So
it's just E-l?
MS. SPEED: Yeah.
JUDGE: If you'll raise your right hand, we'll
take your oath.
(The witness was sworn.)
MS. SPEED: I'm going to be very, very short.
I wasn't planning on doing this until, like, a second ago.

First of all, I agree with everything that people have said here. I've lived here five years. I was born here and I moved back five years and I've seen just radical changes. I live on the Meramec. I know what's happening to the state of Missouri and our climate, and
that this is happening all over the world, that this is the hottest decade ever recorded.

I guess, to me, it comes down to one -- two things. We base our decisions on our values. That's how make choices is on what we value, so I guess this Commission has to decide what's more important for the state of Missouri: Is it more important to protect people's health? Is it more important to limit pollution? Or is it more important to let a corporation continue to profit from a lot of misery and deterioration or our land and our water you our environment. So I guess that's what you have to think of is what does this Commission value more, and make your choice based on that.

And I hope you value the right thing.
JUDGE: Thank you, Ms. Speed. If you'll just stay for a minute. Does Ameren have any questions? MS. JOHNSON: No, Your Honor.

JUDGE: The Staff?
MR. PRINGLE: No, Judge.
JUDGE: Office of Public Counsel?
MR. HALL: None, thank you.
JUDGE: Does The Commission have questions? COMMISSIONER COLEMAN: No. COMMISSIONER RUPP: No.

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JUDGE: Thanks so much, Ms. Speed, for coming up.

Does anyone else want to share some comments with us?

Okay. At this point, does either commissioner have any closing remarks?

COMMISSIONER RUPP: No.
COMMISSIONER COLEMAN: No.
JUDGE: I'd like to thank all of the
participants this afternoon for your comments, and if you have additional comments or someone who could not be present would like to comment, you may make written comments by contacting the Office of Public Counsel, they're represented here, or by going to the Public Service Commission's website.

At this point, we're going to adjourn the hearing. Have a good day, and we're off the record.
(Thereupon, the hearing concluded at 1:49 p.m.)
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-REPORTER'S CERTIFICATE -

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I, Angie Schlotzhauer, a Certified Court Reporter within and for the State of Missouri, do certify that I was present at Sunset Hills City Hall, 3939 Lindbergh Boulevard, on the \(16 t h\) day of January, 2020; that thereafter, a hearing was held; that all proceedings which then transpired were reduced to writing by me, and that the foregoing pages are a true and accurate transcript of the record of proceedings made by me at that time.

IN WITNESS WHEREOF, I have hereunto set my hand this 23rd of January, 2020.
/s/ Angie Schlotzhauer

ANGIE SCHLOTZHAUER
Certified Court Reporter within and for the State of Missouri and for the State of Illinois MO: \#1429 IL: \#084.004898
\begin{tabular}{|c|c|c|c|c|}
\hline & 40:11 & 7:4 & back (2) & 15:22;17:10;19: \\
\hline \$ & address (1) & annual (1) & 34:14;38:23 & 28:10 \\
\hline & 18:15 & 15:5 & background (1) & bills (3) \\
\hline \$11 (1) & adjacent (1) & apologize (1) & 15:12 & 19:10;21:8;33:15 \\
\hline 27:6 & 23:9 & 4:19 & bad (2) & bipartisan (1) \\
\hline \[
\$ 2(2)
\] & adjourn (1) & appeal (1) & 15:14;16:8 & \[
14: 20
\] \\
\hline \[
11: 24 ; 18: 18
\] & 40:16 & 12:8 & barely-meeting (1) & bit (3) \\
\hline \$28 (3) & adults (2) & appear (1) & 23:10 & 16:20;23:13;28: \\
\hline 8:12,12;27:10 & 14:8,9 & 5:22 & Barnes (1) & board (1) \\
\hline \$29 (2) & \[
\begin{gathered}
\text { advantage (2) } \\
33: 2.8
\end{gathered}
\] & \[
\begin{aligned}
& \text { appearance (1) } \\
& 5: 2
\end{aligned}
\] & \(32: 8\)
base (2) & \[
\begin{array}{c|}
34: 3 \\
\text { bona (1) }
\end{array}
\] \\
\hline \[
\$ 32(1)
\] & advocating (1) & appearing (1) & 25:7;39:4 & 10:9 \\
\hline 8:14 & 19:14 & 5:15 & based (1) & born (1) \\
\hline \$347 (1) & affected (1) & applied (3) & 39:13 & 38:22 \\
\hline 8:4 & 16:5 & 13:18;14:5;34:3 & basically (1) & both (2) \\
\hline \$4 (1) & afford (2) & appreciate (4) & 14:24 & 25:25;29:2 \\
\hline 18:21 & 33:6;34:7 & 15:24;16:11;31:5; & basis (1) & boy (2) \\
\hline \$9 (2) & afternoon (2) & 34:21 & 14:24 & 28:10,15 \\
\hline 18:16;27:5 & 4:4;40:10 & approach (1) & battery (1) & breathe (2)
\[
16: 5 ; 34: 1
\] \\
\hline A & 8:11;9:15;14:2; & area (3) & Bayham (9) & bring (4) \\
\hline & 18:5;27:24;32:1;33:8;
\(36: 23\) & \(16: 17 ; 28: 18 ; 31: 8\)
areas (1) & \(9: 16,17,19,19,21\),
\(24 \cdot 10 \cdot 20,23 \cdot 11 \cdot 8\) & \begin{tabular}{l}
\[
15: 4,24 ; 28: 8,15
\] \\
brings (2)
\end{tabular} \\
\hline able (4) & \multirow[t]{2}{*}{\[
\begin{array}{|c|}
\hline \text { against (1) } \\
31: 17
\end{array}
\]} & \multirow[t]{2}{*}{\[
\begin{gathered}
21: 5 \\
\text { argue (1) }
\end{gathered}
\]} & \multirow[t]{2}{*}{\[
\begin{gathered}
\text { B-a-y-h-a-m (1) } \\
9: 20
\end{gathered}
\]} & \[
15: 12 ; 17: 6
\] \\
\hline \[
36: 20
\] & & & & brought (3) \\
\hline aboveground (1) & ago (2) & 34:4 & beauty (1) & 27:2;36:18;37:4 \\
\hline \[
23: 13
\] & 20:15;38:20 & \(\underset{34 \cdot 1}{\operatorname{argued}}\) (1) & \[
23: 15
\] & build (1) \\
\hline accelerate (5) & \[
\begin{aligned}
& \text { agree (3) } \\
& 25: 6 ; 36: 19 ; 38: 21
\end{aligned}
\] & \(34: 1\)
around (1) & \[
\begin{array}{|c}
\hline \text { became (1) } \\
14: 14
\end{array}
\] & \[
\begin{array}{|c|}
35: 2 \\
\text { burning (1) }
\end{array}
\] \\
\hline \[
\begin{aligned}
& 16: 1,10,12 ; 17: 10, \\
& 14
\end{aligned}
\] & Air (10) & 32:21 & become (1) & 10:16 \\
\hline accelerating (1) & 7:18;12:9,9;16:5,9; & array (1) & 10:2 & business (1) \\
\hline \[
17: 11
\] & 23:1;27:24;31:6,10, & 33:3 & beg (1) & \[
4: 10
\] \\
\hline Accelerator (1) & \multirow[t]{2}{*}{allowed (1)} & \(\operatorname{arsenic}(1)\)
\(34: 16\) & \(34: 11\)
begin (2) & \[
\begin{array}{|c}
\text { businesses (1) } \\
25: 9
\end{array}
\] \\
\hline \multirow[t]{2}{*}{accepting (1)} & & ash (1) & 5:1;35:11 & buy (2) \\
\hline & almost (2) & 23:22 & behalf (2) & 8:5;27:21 \\
\hline \(\underset{35.3}{\text { according (1) }}\) & \[
\begin{gathered}
4: 5 ; 31: 12 \\
\text { alternative (1) }
\end{gathered}
\] & \[
\begin{array}{|c|}
\hline \text { aside (1) } \\
30: 24
\end{array}
\] & \begin{tabular}{l}
5:5,15 \\
behind (5)
\end{tabular} & C \\
\hline account (1) & \multirow[t]{2}{*}{10:14
always (2)} & \[
\begin{gathered}
30: 24 \\
\text { aspect (1 }
\end{gathered}
\] & \[
12: 17: 16: 20: 34: 24
\] & C \\
\hline \multirow[t]{2}{*}{\[
\begin{aligned}
& \text { 21:10 } \\
& \text { accountable (1) }
\end{aligned}
\]} & & 28:24 & 37:8,9 & Caleb (1) \\
\hline & \multirow[t]{2}{*}{16:6;23:6
Ameren (51)} & aspirations (1) & below (1) & 5:14 \\
\hline \multirow[t]{2}{*}{\[
32: 14
\]} & & 10:2 & 17:2 & call (2) \\
\hline & Ameren (51)
4:10;5:3,5;7:14,17; & assertion (1) & bench (1) & 5:21,22 \\
\hline \[
\begin{aligned}
& \text { accurately (1) } \\
& 15: 9
\end{aligned}
\] & \[
\begin{aligned}
& \text { 4:10;5:3,5;7:14,17; } \\
& \text { 8:4,23;9:3;10:1,6,10, }
\end{aligned}
\] & 25:16 & 6:11 & calling (1) \\
\hline acquainted (1) & \[
22 ; 11: 21 ; 12: 3,7,12,
\] & \[
\begin{array}{|l}
\text { Association (1) } \\
15: 7
\end{array}
\] & \[
\begin{array}{|c|}
\hline \text { benefit (2) } \\
24: 2 ; 37: 20
\end{array}
\] & \(20: 16\)
came (3) \\
\hline across (1) & 17:21;18:17,23,25; & Atmospheric (1) & Berg (9) & 8:10;15:6;20:12 \\
\hline \(34: 3\) & 19:20;21:1,16;22:22; & 15:6 & 24:19,19,21,24,24; & can (17) \\
\hline Act (3) & \[
\begin{aligned}
& \text { 23:1;24:6;25:4;26:6, } \\
& 25 ; 27: 6,14,20,23,25 ;
\end{aligned}
\] & attention (1) & 26:4,7,16;32:5 & 5:25;6:10;18:22; \\
\hline \(7: 18 ; 12: 9 ; 23: 23\)
action (2) & \[
\begin{aligned}
& 25 ; 27: 6,14,20,23,25 ; \\
& 28: 10,24 ; 29: 4,5,11,
\end{aligned}
\] & 28:17
attorneys (1) & B-e-r-g (1)
24:21 & \begin{tabular}{l}
21:8;25:4,10;28:24; \\
29:11;30:14;31:5,6,
\end{tabular} \\
\hline action (2)
14:15;16 & \multirow[t]{2}{*}{\[
\begin{aligned}
& 15 ; 32: 15 ; 35: 2,20 \\
& 36: 16,23 ; 37: 14 ; 39: 17
\end{aligned}
\]} & 6:9 & 24:21
Bertram (8) & 29:11;30:14;31:5,6, \\
\hline actions (1) & & authority (1) & \[
18: 7,10,10,12,15
\] & 36:19 \\
\hline \multirow[t]{2}{*}{\(16: 1\)
active (2)} & Ameren-proposed (1) & 37:10 & 19:18,21;20:5 & cancer (1) \\
\hline & \multirow[t]{2}{*}{\[
\begin{gathered}
22: 16 \\
\text { Ameren's (4) }
\end{gathered}
\]} & average (1) & B-e-r-t-r-a-m (1) & 25:22 \\
\hline \multirow[t]{2}{*}{14:13,15} & & 8:15 & 18:11 & cancers (1) \\
\hline & \[
\begin{aligned}
& 7: 10 ; 11: 24 ; 23: 20 ; \\
& 27: 2
\end{aligned}
\] & aware (2) & best (4) & \(32: 10\)
Capital (1) \\
\hline \multirow[t]{2}{*}{\[
\begin{aligned}
& 8: 15 ; 15: 10,23 \\
& 16: 19 ; 31: 14 ; 32: 21
\end{aligned}
\]} & analysis (3) & \(27: 1,9\)
away (1) & 17:4;18:25;19:15, 16 & \[
\begin{array}{|c}
\text { Capital (1) } \\
10: 4
\end{array}
\] \\
\hline & 8:9,10,23 & 12:5 & better (4) & captioned (1) \\
\hline adding (1) & \multirow[t]{3}{*}{\[
\begin{gathered}
\text { Andy (3) } \\
\text { 6:22;7:4,9 } \\
\text { A-n-d-y (1) }
\end{gathered}
\]} & & 17:1;28:24;29:11; & 4:9 \\
\hline \multirow[t]{2}{*}{\(21: 7\)
additional (1)} & & B & 35:13 & carbon (1) \\
\hline & & & big (4) & 25:5 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|}
\hline care (3) & 20:14,14 & coming (2) & consequently (1) & 20:16 \\
\hline 20:16,16;24:25 & Cindy (4) & 9:16;40:1 & 23:2 & Crews (11) \\
\hline case (2) & 20:7,9;36:18;37:6 & comment (6) & conservation (2) & 36:7,8,10,10,11,14; \\
\hline 5:19;31:16 & C-i-n-d-y (1) & 7:9,11;20:12;25:13; & 12:1;22:19 & 37:13,14,19,22,23 \\
\hline cases (2) & 20:9 & 38:1;40:12 & conserve (1) & C-r-e-w-s (1) \\
\hline 8:16;30:19 & cited (1) & comments (11) & 33:22 & 36:10 \\
\hline cause (1) & 7:20 & 5:20;6:1,6;9:25; & consider (2) & crisis (1) \\
\hline 25:20 & Citizens (1) & 20:18;25:2;30:14; & 34:20;37:4 & 25:3 \\
\hline causes (2) & 14:17 & 40:3,10,11,13 & consideration (1) & crops (1) \\
\hline 25:22,25 & City (2) & Commission (24) & 37:12 & 33:21 \\
\hline causing (1) & 20:21;29:10 & 4:7;5:9,10;6:1,8,11, & constantly (1) & current (1) \\
\hline 12:10 & Clean (15) & 17;7:8;8:22;9:6;11:4, & 34:14 & 28:9 \\
\hline celebrated (1) & 7:18;10:16;12:9,16, & 20;19:8,12;20:25; & consumers (1) & currently (2) \\
\hline 23:14 & 21;21:13;23:23;29:3, & 24:1;27:3;28:23;37:1, & 34:5 & 16:18;33:4 \\
\hline Centers (1) & 8;31:6,22,22;32:16; & 3,11;39:5,13,23 & contact (1) & customer (4) \\
\hline 25:1 & 33:1;34:13 & Commissioner (33) & 5:16 & 11:24;12:4,11;27:4 \\
\hline century (1) & cleaner (1) & 4:15,16,19,24;9:10, & contacting (1) & customers (10) \\
\hline 10:18 & 22:23 & 11,12;11:5,6;13:7,8; & 40:13 & 8:18,25;10:12; \\
\hline certainly (2) & clearly (1) & 18:3,4;20:3,4;21:23, & continue (3) & \[
11: 23 ; 12: 1 ; 18: 23
\] \\
\hline 7:24;31:5 & 4:21 & 24;24:14,15,18;26:14, & 8:7;10:12;39:9 & 22:19;29:9,10,11 \\
\hline cetera (1) & Climate (7) & 15,17;29:23,24;36:3, & continuing (1) & customer's (1) \\
\hline 10:9 & 14:17,22,23;15:1,7; & 4;38:9;39:24,25;40:5, & 8:11 & 27:15 \\
\hline chair (1) & 25:3;38:25 & 7,8 & contributed (1) & cut (1) \\
\hline 20:13 & clinic (1) & Commissioners (11) & 7:22 & 32:5 \\
\hline chairs (1) & 25:21 & 4:17;6:13;13:6; & control (1) & cycle (1) \\
\hline 22:25 & close (7) & 18:2;20:2;21:22; & 37:11 & 8:16 \\
\hline \[
\begin{gathered}
\text { challenge (1) } \\
25: 15
\end{gathered}
\] & \[
\begin{aligned}
& \text { 6:23;16:15,16,17; } \\
& 17: 15 ; 30: 20,25
\end{aligned}
\] & 24:13;26:13;27:8;
29:22;36:2 & controls (1) & D \\
\hline challenges (1) & closed (1) & Commission's (1) & conveniently (1) & \\
\hline 14:21 & 31:15 & 40:15 & 35:5 & d/b/a (1) \\
\hline chance (3) & closing (2) & communities (1) & co-op (1) & 5:5 \\
\hline 6:5;19:15,16 & 21:1;40:6 & 21:4 & 27:12 & damages (1) \\
\hline change (5) & closure (1) & community (1) & COPD (2) & 23:1 \\
\hline 14:22;17:6,11; & 17:11 & 8:1 & 25:23;26:1 & Daniel (2) \\
\hline 18:16;25:6 & Club (2) & companies (3) & corporation (2) & 24:19,24 \\
\hline changes (4) & 8:3;14:14 & 10:6;12:19;35:13 & 19:2;39:9 & D-a-n-i-e-l (1) \\
\hline 22:16,21,24;38:24 & co2 (1) & Company (6) & corporations (1) & 24:21 \\
\hline chapter (2) & 23:7 & 4:10;5:5;6:16;8:8; & 20:20 & data (1) \\
\hline 14:13,14 & coal (18) & 33:10;34:21 & corrected (1) & 14:25 \\
\hline charge (7) & 7:13,16,25;8:6,17, & compensate (1) & 35:16 & dates (1) \\
\hline 11:24;21:8;27:4,5, & 23;10:16;11:21; & 22:21 & cost (7) & 17:13 \\
\hline 12;28:3;33:12 & 12:13,19,19;15:17; & competitive (1) & 8:5,6,9;10:8,16; & Day (5) \\
\hline charged (2) & 21:1;23:20,22;28:14, & \[
34: 9
\] & 25:17;26:1 & \[
10: 6 ; 12: 6 ; 16: 10
\] \\
\hline 18:16;33:18 & \[
16,20
\] & completed (1) & costs (9) & \[
23: 22 ; 40: 17
\] \\
\hline charges (3) & coal-ash (6) & 6:7 & 7:13,24;8:1,18,24; & DC (1) \\
\hline 22:17,18;27:10 & 23:19;31:23;32:17, & compliance (1) & 11:22;31:21,23;34:19 & 14:19 \\
\hline cheap (1) & 21;35:2,8 & 8:19 & counsel (18) & deactivate (1) \\
\hline 26:2 & coal-fired (2) & comply (1) & 5:2,3,13,15;6:17; & 10:16 \\
\hline cheaper (2) & 23:7;25:24 & 12:8 & 9:8;11:2;13:4;17:25; & deadly (1) \\
\hline 8:15;10:15 & coal-powered (1) & concern (2) & 19:25;21:20;24:11; & 23:16 \\
\hline check (1) & 17:12 & 15:23;18:20 & 26:11;29:20;35:25; & death (3) \\
\hline 26:25 & coast (1) & concerned (3) & 37:18;39:21;40:13 & 25:20,22,25 \\
\hline child (1) & 31:19 & 10:14;18:25;36:22 & country (1) & deaths (2) \\
\hline 28:18 & Coleman (18) & conclude (1) & 23:14 & 7:23;12:10 \\
\hline children (4) & 4:15,19,24;9:11; & 10:19 & County (4) & decade (2) \\
\hline 16:2,3,4;28:8 & 11:5;13:7;18:3;20:3; & concluded (1) & 10:1;26:25;28:9,12 & 15:11;39:2 \\
\hline choice (2) & 21:23;24:14,18; & 40:18 & court (1) & decide (1) \\
\hline 31:22;39:13 & \[
26: 14,17 ; 29: 23 ; 36: 3
\] & conditioner (1) & \[
12: 8
\] & 39:6 \\
\hline choices (1) & \[
38: 9 ; 39: 24 ; 40: 8
\] & \[
27: 24
\] & courteous (1) & decided (1) \\
\hline 39:5 & color (1) & congestive (1) & 6:19 & 35:10 \\
\hline Chouteau (1) & 21:5 & 32:10 & Crawford (1) & decisions (1) \\
\hline 5:6 & combined (1) & congress (1) & 27:11 & 39:4 \\
\hline church (2) & 8:16 & 14:19 & creation (1) & deck (1) \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|}
\hline 22:24 & drink (1) & 37:10 & 12:15;27:11;33:18 & fields (1) \\
\hline Decrease (3) & 34:16 & emergency (1) & exclamation (1) & 28:13 \\
\hline 4:11;25:5,7 & drop (3) & 34:7 & 34:1 & figure (1) \\
\hline defending (1) & 8:7,12;12:7 & emission (1) & excused (1) & 27:19 \\
\hline 10:17 & due (1) & 31:10 & 6:8 & file (1) \\
\hline degree (1) & 10:11 & emissions (3) & expanding (1) & 4:8 \\
\hline 14:5 & dumps (1) & 23:6;25:5,24 & 23:9 & firmly (1) \\
\hline delays (1) & 10:17 & Empire (1) & expectations (1) & 36:19 \\
\hline 10:14 & during (2) & 29:1 & 32:19 & First (8) \\
\hline delivering (1) & 31:4;32:1 & employ (1) & expensive (7) & 16:16;25:3;27:4; \\
\hline 23:16 & & 19:3 & 8:6,17,19;12:5,11, & 28:5;31:14;37:20; \\
\hline Demo (1) & E & enabling (1) & 13;22:23 & 38:8,21 \\
\hline \[
10: 6
\] & & \(37: 1\) & experience (1) & five (3) \\
\hline Department (1) & earlier (1) & encourage (1) & 28:7 & 6:5;38:22,23 \\
\hline \[
23: 18
\] & 25:14 & 25:10 & expert (2) & fixed (10) \\
\hline Depot (1) & early (2) & end (1) & \[
7: 20 ; 8: 3
\] & \[
21: 8,9 ; 22: 16,18
\] \\
\hline \[
27: 22
\] & \[
23: 19 ; 34: 24
\] & \[
18: 21
\] & exposed (1) & \[
27: 5,10,12 ; 28: 3
\] \\
\hline deterioration (1) & eastern (1) & energy (30) & \[
21: 5
\] & \[
33: 13 ; 34: 2
\] \\
\hline \[
39: 10
\] & \[
31: 18
\] & \[
8: 5,9 ; 10: 2,4,5,15
\] & & flat (3) \\
\hline devastates (1) & economic (1) & \[
12: 1,4,13,14,16,21
\] & F & \[
33: 19,20 ; 36: 16
\] \\
\hline 23:8 & \[
8: 1
\] & 15:17,19;16:13; & & fleet (2) \\
\hline die (1) & economics (1) & 20:22;21:11,13; & fact (1) & \[
32: 15 ; 33: 10
\] \\
\hline \[
32: 3
\] & \[
18: 18
\] & 22:18,23;25:8;27:15; & \[
31: 13
\] & floodplain (2) \\
\hline dioxide (2) & economy (1) & \[
28: 10 ; 29: 3,8 ; 33: 1,5,
\] & factor (1) & \[
35: 3,7
\] \\
\hline \[
28: 20,21
\] & \[
17: 7
\] & \[
17 ; 34: 5,13
\] & \[
27: 7
\] & floodplains (1) \\
\hline direction (3) & educational (1) & engaged (1) & facts (2) & \[
23: 10
\] \\
\hline 25:11;27:8,14 & \[
14: 23
\] & \[
30: 17
\] & 36:17;37:4 & folks (3) \\
\hline dirtiest (2) & Edward (2) & enough (4) & failure (1) & 21:4,8,10 \\
\hline 15:17,18 & 9:15,19 & 20:20,21;32:16; & 32:10 & followed (1) \\
\hline dirty (4) & E-d-w-a-r-d (1) & 34:13 & fair (1) & \[
7: 16
\] \\
\hline 12:12,13;21:1,3 & 9:19 & enter (1) & 35:17 & force (1) \\
\hline disadvantaged (1) & effect (1) & \[
5: 2
\] & fall (3) & \[
10: 11
\] \\
\hline \[
21: 4
\] & \[
10: 17
\] & environment (5) & \[
7: 14,19 ; 14: 16
\] & forth (1) \\
\hline discharge (1) & efficiency (7) & 16:9;25:18;36:22; & Family (3) & \[
37: 25
\] \\
\hline \[
23: 24
\] & \[
10: 3 ; 12: 4,13 ; 20: 23
\] & \[
37: 5 ; 39: 11
\] & \[
24: 25 ; 32: 8 ; 36: 20
\] & forward (2) \\
\hline discourage (2) & 27:16,25;28:4 & environmental (3) & far (4) & \[
18: 8 ; 38: 2
\] \\
\hline \[
22: 18 ; 27: 15
\] & efficient (2) & 8:19;14:15;34:25 & \[
15: 16 ; 17: 14 ; 37: 8,9
\] & fossil (2) \\
\hline discourages (3) & \[
21: 11 ; 27: 19
\] & equitable (1) & farm (3) & \[
15: 18 ; 16: 8
\] \\
\hline 12:1;25:8,8 & efficiently (1) & \[
18: 22
\] & \[
32: 7 ; 33: 3,22
\] & found (3) \\
\hline discussed (1) & \[
22: 23
\] & ER-2019-0335 (1) & fast (3) & \[
7: 17 ; 8: 3,11
\] \\
\hline 36:21 & effort (2) & 4:9 & \[
20: 20,21 ; 34: 13
\] & four (1) \\
\hline disease (3) & 10:10,11 & established (1) & faster (5) & \[
30: 22
\] \\
\hline 25:22,23,25 & efforts (2) & \[
25: 23
\] & 17:3;20:24,24;21:2 & fourth (1) \\
\hline diseases (1) & 14:19;21:13 & estimated (1) & 29:6 & \[
23: 7
\] \\
\hline 32:11 & either (4) & 8:4 & favor (1) & frightening (1) \\
\hline docket (1) & 4:17;9:10;22:4; & et (1) & \[
19: 5
\] & \[
22: 25
\] \\
\hline \[
8: 2
\] & \[
40: 5
\] & \[
10: 8
\] & federal (5) & front (3) \\
\hline Doctor (1) & E-1 (1) & even (5) & 7:14;20:19;23:23; & 16:7,11;28:5 \\
\hline \[
26: 17
\] & \[
38: 13
\] & 8:15;17:1;23:4,9; & \[
32: 22 ; 35: 14
\] & fuel (2) \\
\hline dollars (1) & Electric (4) & 33:6 & fee (7) & \[
15: 18 ; 16: 8
\] \\
\hline \[
12: 18
\] & 4:10,11;5:5;27:11 & Evergy (1) & \[
18: 17,22 ; 25: 7,7
\] & full (9) \\
\hline done (2) & electricity (8) & \[
29: 2
\] & 33:19,20;34:8 & \[
7: 2 ; 9: 17 ; 11: 12
\] \\
\hline 22:22;37:2 & \[
12: 2 ; 22: 20 ; 25: 9,15
\] & everybody (2) & feel (5) & \[
20: 8 ; 22: 5 ; 25: 17
\] \\
\hline dose (1) & 17;26:2;27:9,13 & \[
15: 4 ; 16: 4
\] & 20:15,24;21:7;34:8; & \[
26: 19 ; 36: 8 ; 38: 3
\] \\
\hline 28:19 & elements (1) & everyone (2) & 36:21 & fully (1) \\
\hline down (8) & 27:2 & 6:5,19 & feet (1) & 14:25 \\
\hline \[
5: 23 ; 8: 12 ; 28: 4,15
\] & eloquent (1) & evidence (1) & 35:6 & function (1) \\
\hline \[
17 ; 35: 6,14 ; 39: 3
\] & \[
36: 14
\] & 6:14 & few (1) & 14:8 \\
\hline DR (18) & else (3) & evidentiary (1) & 35:6 & fund (1) \\
\hline 13:12,14,17,22,25; & 33:15;37:25;40:3 & 6:15 & fide (1) & 10:4 \\
\hline 14:4,4;17:17,19;18:5, & elsewhere (1) & evidently (1) & 10:9 & future (3) \\
\hline 6;24:21,24;26:4,7,16; & 34:6 & 4:20 & field (1) & \(8: 24 ; 11: 22 ; 30: 19\) \\
\hline 32:5;36:18 & embarrassment (1) & example (3) & 28:16 & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|}
\hline & & Hills (1) & 6:13 & internal (1) \\
\hline G & H & 4:6 & important (7) & 24:25 \\
\hline & & & 2;27:7;31:11; & intervened (1) \\
\hline gains (1) & Hall (14) & \[
\begin{aligned}
& 31: 20 ; 32: 13 \\
& \text { Home (4) }
\end{aligned}
\] & \[
\begin{gathered}
\text { 39:6,7,8,9 } \\
\text { impressive (1) }
\end{gathered}
\] & \begin{tabular}{l}
5:19 \\
interveners (1)
\end{tabular} \\
\hline 17:9 & 5:14,14;9:9;11:3; & Home (4)
\[
27: 22 ; 32: 7 ; 33: 14,
\] & \begin{tabular}{l}
impressive (1) \\
10:7
\end{tabular} & \[
\begin{aligned}
& \text { interveners (1) } \\
& 5: 18
\end{aligned}
\] \\
\hline gallon (1) & 13:5;18:1;20:1;21:21; & 27:22;32:7;33:14,
\[
19
\] & \[
\begin{gathered}
\text { 10:7 } \\
\text { incentive (4) }
\end{gathered}
\] & \[
\begin{gathered}
\text { 5:18 } \\
\text { intimately (1) }
\end{gathered}
\] \\
\hline gallons (1) & 36:1;37:19;39:22 & Honor (22) & 27:15;33:16,17; & 27:1 \\
\hline 23:22 & hand (12) & 5:11;9:5,7;10:24; & 34:20 & into (5) \\
\hline gas (1)
8.15 & 7:1;9:22;11:17; & \[
\begin{aligned}
& 11: 3 ; 13: 1,3,5 ; 17: 22 \\
& 24 ; 19: 22,24 ; 21: 17
\end{aligned}
\] & \[
\begin{array}{|c}
\text { incentives (1) } \\
33: 11
\end{array}
\] & \[
\begin{aligned}
& \text { 8:2;16:9;18:18; } \\
& 21: 9: 23: 15
\end{aligned}
\] \\
\hline \(8: 15\)
gases (1) & 13:23;18:13;20:10;
22:13;24:22;26:22; & \[
\begin{aligned}
& 24 ; 19: 22,24 ; 21: 17 \\
& 24: 8,10 ; 26: 8,10,12
\end{aligned}
\] & incentivize (2) & investing (2) \\
\hline 16:8 & 30:11;36:12;38:15, & 29:19;35:22;37:15; & 12:4;17:5 & 12:20,21 \\
\hline general (1) & happen (4) & 39:18 & including (1) & investment (1) \\
\hline 16:17 & 17:15;33:19;34:25; & \[
\begin{array}{|c|}
\hline \text { hope (1) } \\
39: 15
\end{array}
\] & \[
\begin{gathered}
8: 20 \\
\text { income (1) }
\end{gathered}
\] & \begin{tabular}{l}
\[
29: 8
\] \\
invest-your-own (1)
\end{tabular} \\
\hline \[
\begin{gathered}
\text { gentleman (1) } \\
15: 24
\end{gathered}
\] & \[
\begin{gathered}
35: 14 \\
\text { happened (1) }
\end{gathered}
\] & \[
\begin{gathered}
39: 15 \\
\text { hopefully (1) }
\end{gathered}
\] & \[
\begin{array}{|c}
\text { income (1) } \\
33: 13
\end{array}
\] & \[
\begin{aligned}
& \text { invest-your-own (1) } \\
& 28: 25
\end{aligned}
\] \\
\hline gets (1) & \[
32: 19
\] & 4:21 & incomes (1) & IOUs (2) \\
\hline 34:3 & happening (2) & Hospitals (1) & 21:9 & 29:3,12 \\
\hline Gilley (7) & 38:25;39:1 & \(32: 7\)
Host (15) & increase (8) & Iowa (1) \\
\hline \[
11: 9,10,14,14,19
\] & harm (1) & Host (15) 13:11,12,14,14,17, & \[
\begin{aligned}
& \text { 10:15;11:24,25; } \\
& \text { 18:17,21;25:7;34:2; }
\end{aligned}
\] & \begin{tabular}{l}
16:23 \\
irreparable (1)
\end{tabular} \\
\hline G-i-1-1-e-y (1) & \multirow[t]{2}{*}{harmed (1)} & 17.1, \({ }^{\text {17, }}\), \(25,14: 4,4 ;\) & 36:25 & 23:1 \\
\hline 11:15 & & 17:17,19;18:5,6; & increased (1) & irrigate (1) \\
\hline Gilly (1) & Harvard (1)
\(32: 7\) & \[
\begin{gathered}
\text { 36:18 } \\
\mathbf{H - o - s - t}(\mathbf{1})
\end{gathered}
\] & 27:4
increases (1) & \begin{tabular}{l}
\[
33: 22
\] \\
Island (5)
\end{tabular} \\
\hline \multirow[t]{2}{*}{given (2)} & \multirow[b]{2}{*}{health (8)} & \[
\begin{gathered}
\text { H-o-s-t (1) } \\
\text { 13:17 }
\end{gathered}
\] & increases (1)
28:3 & \[
\begin{aligned}
& \text { Island (5) } \\
& \quad 7: 16,19,21 ; 8: 21 ;
\end{aligned}
\] \\
\hline & & hot (1) & increasing (1) & \[
31: 17
\] \\
\hline \multirow[t]{2}{*}{global (1)
\(25: 3\)} & \multirow[t]{2}{*}{\[
\begin{aligned}
& 23: 2 ; 25: 1,19 ; 34: 19 \\
& 39: 8
\end{aligned}
\]} & 23:24 & 36:16 & issue (2) \\
\hline & & hottest (3) 15:8,11;39:2 & \[
\begin{gathered}
\text { indeed (1) } \\
24: 1
\end{gathered}
\] & \begin{tabular}{l}
8:9;37:8 \\
issues (3)
\end{tabular} \\
\hline goal (2) & healthcare (2) & \[
\begin{aligned}
& \text { 15:8,11;39:2 } \\
& \text { hour (2) }
\end{aligned}
\] & \[
\begin{array}{|c|}
\hline \text { 24:1 } \\
\text { Indiana (1) }
\end{array}
\] & \[
\begin{aligned}
& \text { issues (3) } \\
& 7: 11 ; 15: 3,22
\end{aligned}
\] \\
\hline \[
\begin{aligned}
& 16: 13,22 \\
& \text { goes (1) }
\end{aligned}
\] & \(14: 6 ; 32: 6\)
hear (2) & 8:13,14 & 15:16 & \\
\hline 28:4 & 4:21;30:15 & house (3) & indicated (1) & J \\
\hline Good (7) & heard (4) & \begin{tabular}{l}
\[
27: 17,17,21
\] \\
housing (1)
\end{tabular} & & \\
\hline \[
\begin{aligned}
& 4: 4 ; 17: 6 ; 18: 19 ; \\
& 19: 15 ; 30: 13 ; 38: 12 ;
\end{aligned}
\] & \[
\begin{aligned}
& 7: 12 ; 15: 20 ; 20: 19 \\
& 31: 4
\end{aligned}
\] & \[
\begin{array}{|c}
\hline \text { housing (1) } \\
21: 5
\end{array}
\] & \[
\begin{array}{|c}
\text { inefficient (1) } \\
27: 18
\end{array}
\] & \[
\begin{array}{r}
\text { Jamie (2) } \\
11: 9,14
\end{array}
\] \\
\hline 40:17 & hearing (8) & huge (2) & inefficiently (1) & J-a-m-i-e (1) \\
\hline government (1) & 4:8,14;6:15;10:11; & \(31: 11,13\)
hundreds (3) & 10:13 & 11:14 \\
\hline 20:19 & 15:24;30:14;40:16,18 & hundreds (3) & inexpensive (2) & Janet (2) \\
\hline Graham (1) & hearings (2) & 12:10,18;32:4 & 25:15,16 & 36:7,10 \\
\hline 4:13 & 30:23,25 & hurting (1) & influence (1) & J-a-n-e-t (1) \\
\hline \[
\begin{aligned}
& \text { grandchildren (1) } \\
& \text { 16:3 }
\end{aligned}
\] & heart (3) & \[
\begin{gathered}
22: 17 \\
\text { hurts (1) }
\end{gathered}
\] & \[
\begin{array}{|c|}
\hline \text { 19:4 } \\
\text { influenced (2) }
\end{array}
\] & \[
\begin{gathered}
\text { 37:22 } \\
\text { January (2) }
\end{gathered}
\] \\
\hline \multirow[t]{2}{*}{grandmother (2)
\(20: 13,23\)} & heart-and-lung-related (1) & 11:25 & 19:9,11 & January \\
\hline & \[
32: 11
\] & hypothetical (1) & information (1) & Jewish (1) \\
\hline \multirow[t]{2}{*}{grant (1)
\(37: 1\)} & held (1) & 18:24 & 5:16 & 32:8 \\
\hline & \multirow[t]{2}{*}{Helen (3)} & & \[
\begin{array}{|c}
\text { injury (1) } \\
25: 19
\end{array}
\] & \[
\begin{gathered}
\text { job (1) } \\
35: 12
\end{gathered}
\] \\
\hline green (1) & & I & 25:19 & 35:12 \\
\hline \(20: 13\)
grid (1) & 13:11,17;14:4 & & \[
\begin{array}{|c}
\text { innovating (1) } \\
10: 18
\end{array}
\] & jobs (1) 17:6 \\
\hline \(\underset{8: 5}{\operatorname{grid}} \mathbf{( 1 )}\) & H-e-l-e-n (1)
\(13: 17\) & \[
\begin{array}{r}
\text { idea (1) } \\
18: 19
\end{array}
\] & \[
\begin{array}{|c|}
\text { 10:18 } \\
\text { innovation (4) }
\end{array}
\] & \[
\begin{gathered}
\text { 17:6 } \\
\text { John (2) }
\end{gathered}
\] \\
\hline Gross (9) & help (3) & ideas (1) & 10:2,5,6,8 & 26:18,20 \\
\hline \multirow[t]{2}{*}{\[
\begin{aligned}
& 20: 7,7,9,12 ; 21: 15, \\
& 16,25 ; 36: 18 ; 37: 6
\end{aligned}
\]} & 6:22;9:15;30:2 & 19:3 & Innovators (1) & J-o-h-n (1) \\
\hline & Hickey (9) & Illinois (2) & 10:4 & 26:20 \\
\hline \multirow[t]{2}{*}{G-r-0-s-s (1)
20:9} & \multirow[t]{2}{*}{\[
\begin{aligned}
& 26: 18,18,20,20,21, \\
& 24 ; 29: 14,16,25
\end{aligned}
\]} & 16:18;32:18 & insist (1) & Johnson (14) \\
\hline & & Imagine (1) & 20:25 & 5:4,4;9:5;10:24; \\
\hline guess (3) & H-i-c-k-e-y (1) & \[
\begin{gathered}
23: 12 \\
\text { immediate (1) }
\end{gathered}
\] & \[
\begin{array}{|c}
\text { install (1) } \\
7: 15
\end{array}
\] & \[
\begin{aligned}
& \text { 13:1;17:22;19:22; } \\
& \text { 21:17:24:8:26:8; }
\end{aligned}
\] \\
\hline \multirow[t]{4}{*}{guys (1)
\(34: 19\)} & high (1) & \[
\operatorname{immediate}_{36: 25}^{(1)}
\] & \[
\begin{gathered}
7: 15 \\
\text { instead (3) }
\end{gathered}
\] & \[
\begin{aligned}
& \text { 21:17;24:8;26:8; } \\
& \text { 29:17;35:22;37:15; }
\end{aligned}
\] \\
\hline & 28:19 & impacted (2) & 12:3,20,21 & 39:18 \\
\hline & higher (3) & 31:1,24 & interest (1) & Joplin (1) \\
\hline & 29:3,4;33:9 & impartial (1) & 24:4 & 29:9 \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|}
\hline JUDGE (115) & 21;31:2,11;32:3,15; & 27:21 & 8:12,14 & 12:16 \\
\hline 4:4,14,23;5:1,4,8, & 34:25 & limit (2) & low-income (2) & might (2) \\
\hline 12,14,18;6:25;7:8,14, & lacks (1) & 6:4;39:8 & 11:25;22:17 & 19:6;37:1 \\
\hline 17;9:1,6,8,9,10,13,21; & 28:21 & line (1) & Lucky (1) & miles (1) \\
\hline 10:19,21,25;11:1,2,4, & ladies (1) & 33:14 & 30:6 & 30:22 \\
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\hline 18:7,10 & source (1) & 16:14;37:9 & system (1) & 22:25 \\
\hline S-h-a-r-o-n (1) & 10:2 & status (1) & \[
23: 16
\] & today (12) \\
\hline 18:10 & sources (2) & 10:18 & & 4:15;5:19,21;6:12, \\
\hline sheet (2) & 10:15;21:13 & stay (3) & T & 19;7:10;11:8;16:21; \\
\hline 5:22;6:2 & South (1) & 19:19;34:9;39:17 & & 20:12,19;30:14;31:4 \\
\hline shifting (1) & 28:11 & stenographer (2) & tackle (2) & together (1) \\
\hline 12:5 & Southeast (1) & 5:17;37:20 & 14:20;15:2 & 35:16 \\
\hline shooting (1) & 34:6 & step (3) & talk (2) & told (1) \\
\hline 16:22 & speak (1) & 6:25;32:13;37:25 & 15:24;27:1 & 19:8 \\
\hline short (2) & 6:16 & sticker (1) & talking (1) & tonight (1) \\
\hline 32:5;38:18 & speaking (2) & 27:22 & 31:15 & 4:22 \\
\hline short-sighted (1) & \[
6: 19 ; 14: 10
\] & still (1) & Tariffs (1) & took (1) \\
\hline 17:9 & specific (1) & 17:2 & 4:11 & 33:2 \\
\hline show (1) & 6:4 & stop (2) & \(\boldsymbol{t a x}(1)\) & top (3) \\
\hline 29:12 & spectacular (1) & 12:10,17 & 10:12 & 16:14,15,25 \\
\hline showcased (1) & 23:13 & stopgap (1) & taxpayers (1) & totally (1) \\
\hline 10:5 & SPEED (8) & 34:10 & 22:17 & 36:19 \\
\hline Shrewsbury (1) & 38:4,4,7,11,14,18; & storage (1) & teach (2) & tough (1) \\
\hline 7:10 & 39:16;40:1 & 12:14 & 15:13,21 & 21:8 \\
\hline Sierra (2) & S-p-e-e-d (1) & straight (2) & teaching (2) & toward (1) \\
\hline \[
8: 3 ; 14: 14
\] & \[
38: 7
\] & \[
4: 5 ; 9: 16
\] & \[
14: 10,24
\] & \[
34: 13
\] \\
\hline signatures (1) & spell (14) & streams (1) & team (1) & towards (1) \\
\hline 35:1 & 5:25;7:3;9:18; & 23:14 & 20:13 & 17:4 \\
\hline signed (1) & 11:12;13:15;18:8; & study (2) & technologies (1) & toxic (1) \\
\hline 37:24 & 20:8;22:5;24:20; & 8:8;11:21 & 10:8 & 10:17 \\
\hline significant (2) & 26:19;30:7;36:9;38:5, & submitted (1) & ten (3) & toxins (2) \\
\hline \[
7: 15 ; 25: 25
\] & \[
9
\] & \[
8: 2
\] & \[
16: 14,15,25
\] & \[
21: 6 ; 31: 9
\] \\
\hline sign-up (2) & spent (2) & subsidized (1) & ten-mile (1) & track (1) \\
\hline 5:22;6:2 & 8:4;27:18 & \[
27: 23
\] & \[
23: 4
\] & 25:20 \\
\hline situation (1) & spoken (2) & subsidy (2) & terribly (1) & trail (1) \\
\hline 17:7 & 36:15;37:5 & 27:20,25 & 27:18 & \[
12: 17
\] \\
\hline \(\boldsymbol{s i x}(1)\) & spot (1) & suddenly (1) & tested (1) & trailer (1) \\
\hline 20:15 & 35:5 & 33:20 & 32:21 & 33:6 \\
\hline slow (1) & St (11) & suffer (1) & testified (1) & transmogrified (1) \\
\hline 32:25 & 5:6;10:1;14:13; & 32:9 & 7:20 & 23:15 \\
\hline small (1) & 20:21;24:25;26:24; & sulphur (2) & testify (1) & Travis (1) \\
\hline 27:7 & 28:9;29:7,11;31:8; & 28:20,21 & 6:3 & 5:10 \\
\hline smarter (1) & 32:11 & summer (2) & testimony (13) & treat (1) \\
\hline 29:6 & staff (15) & 16:20,24 & 6:7,21;7:21;8:2; & \[
6: 19
\] \\
\hline so2 (1) & 5:9,11;6:17;9:6; & sun (1) & 10:19;11:7;13:10; & treated (1) \\
\hline 23:5 & 10:25;13:2;17:23; & 12:15 & 20:6;24:17;26:5;30:1; & 6:20 \\
\hline soccer (3) & 19:23;21:18;24:9; & Sunset (1) & 32:2;36:6 & try (1) \\
\hline 28:11,13,16 & 26:9;29:18;35:23; & 4:6 & Texas (1) & 6:4 \\
\hline solar (8) & 37:16;39:19 & support (1) & 15:16 & trying (1) \\
\hline 8:7,11,13,13,17:4; & stand (1) & 21:13 & Thanks (3) & \[
27: 19
\] \\
\hline 20:14;25:9;33:3 & 34:23 & supports (1) & 12:23;37:13;40:1 & Ts (1) \\
\hline solutions (1) & standing (1) & 14:25 & theories (1) & 37:21 \\
\hline 22:24 & 37:7 & supposed (1) & 19:3 & twenty (1) \\
\hline somebody (1) & start (1) & 22:8 & therapist (2) & 17:13 \\
\hline 35:15 & 35:16 & sure (6) & 13:18;14:5 & two (10) \\
\hline Someone (4) & state (31) & 6:18;7:4;13:22; & Thereupon (1) & 14:18;16:15;18:20; \\
\hline \(17: 18 ; 19: 7 ; 33: 14 ;\)
40.11 & \[
5: 24 ; 7: 2 ; 9: 17
\] & \(14: 4 ; 28: 1 ; 35: 17\)
swear (9) & \[
40: 18
\] & \[
\begin{aligned}
& 25: 2 ; 27: 1 ; 28: 8,25 ; \\
& 37,212 \cdot 20 \cdot 3
\end{aligned}
\] \\
\hline \[
\begin{gathered}
\text { 40:11 } \\
\text { someone's (1) }
\end{gathered}
\] & \[
\begin{aligned}
& \text { 11:12;12:18;13:15; } \\
& \text { 15:15,20;16:23;19:1, }
\end{aligned}
\] & \[
\begin{array}{|l|}
\hline \text { swear (9) } \\
7: 1 ; 9: 18 ; 11: 17 ;
\end{array}
\] & \[
\begin{array}{|c}
\text { third (1) } \\
15: 15
\end{array}
\] & \\
\hline
\end{tabular}
\begin{tabular}{|c|c|c|c|c|}
\hline & & & & \\
\hline \(\mathbf{U}\) & \[
24: 3
\] & \[
30: 12 ; 36: 7,13 ; 38: 17
\] & \[
4: 2,4
\] & 8 \\
\hline ultimate (1) & 14:17 & 37:24 & 15:9 & 800 (1) \\
\hline \(10: 15\)
UMSL & W & wonderful (2)
\[
15: 10 ; 16: 14
\] & \[
\begin{array}{|c}
1901(1) \\
5: 6
\end{array}
\] & 7:23 \\
\hline \[
10: 4
\] & & Woods (1) & 1915 (1) & 9 \\
\hline unable (1) & waist (1) & 25:14 & 27:17 & \\
\hline 37:7 & 10:17 & work (4) & 1992 (1) & 93 (1) \\
\hline under (5) & wait (1) & 14:20;17:11,14; & 23:19 & 14:7 \\
\hline \[
\begin{aligned}
& 5: 24 ; 13: 20 ; 14: 2 \\
& 27: 6 ; 32: 22
\end{aligned}
\] & \(17: 12\)
wants (1) & \(21: 11\)
worked (4) & 2 & \\
\hline underground (2) & 27:14 & \(32: 5,6,7,8\)
working (5) & & \\
\hline 23:12,15 & warming (3) & working (5) & \[
2(1)
\] & \\
\hline \[
\begin{gathered}
\text { unfortunately (2) } \\
15: 14,19
\end{gathered}
\] & 15:1,1,7
Washington (4) & \[
\begin{aligned}
& 14: 8,15,19 ; 30: 17 ; \\
& 35: 16
\end{aligned}
\] & \[
\begin{gathered}
15: 16 \\
\mathbf{2 , 4 0 0}(\mathbf{1})
\end{gathered}
\] & \\
\hline Union (2) & 14:9,18;16:24; & world (4) & 31:12 & \\
\hline 4:10;5:5 & 30:23 & 14:21;29:5;34:18; & 2,500 (1) & \\
\hline University (2) & waste (3) & 39:1 & 35:1 & \\
\hline 14:9,10 & 23:9,16,22 & wrecking (1) & 20 (1) & \\
\hline \[
\begin{gathered}
\text { unlined (2) } \\
23: 19 ; 35: 8
\end{gathered}
\] & wasting (1) & \[
\begin{array}{|c|}
\hline 23: 1 \\
\text { write (2) }
\end{array}
\] & \[
\begin{array}{|c|}
\hline 32: 6 \\
2016(1)
\end{array}
\] & \\
\hline unscrubbed (1) & water (10) & 19:10;26:25 & 8:5 & \\
\hline 31:3 & 23:2,12,23,24;31:6; & written (1) & 2017 (1) & \\
\hline up (15) & 33:18,20,21;34:16; & 40:12 & 7:17 & \\
\hline \[
\begin{aligned}
& 4: 5,20 ; 6: 25 ; 10: 16 \\
& 11: 12 ; 15: 5 ; 18: 7 ; 27: 6
\end{aligned}
\] & \(39: 11\)
way (8) & Y & \[
\begin{array}{|l|}
\hline 2018(2) \\
8: 6 ; 14: 16
\end{array}
\] & \\
\hline \[
\begin{aligned}
& 28: 13 ; 31: 6,22,22 ; \\
& 32: 16 ; 37: 24 ; 40: 2
\end{aligned}
\] & \[
\begin{aligned}
& \text { 6:20;17:2;19:5; } \\
& 22: 8 ; 25: 15 ; 31: 18 ;
\end{aligned}
\] & yay (1) & \[
\begin{aligned}
& 2019 \text { (2) } \\
& 12: 8 ; 16: 20
\end{aligned}
\] & \\
\hline upgrade (1) & 33:12;37:2 & 27:23 & 2020 (2) & \\
\hline 33:2 & ways (1) & year (6) & 4:2,5 & \\
\hline usage (1) & 33:11 & 8:8,10,21;12:19; & 2030 (1) & \\
\hline 12:5 & website (1) & 15:8;32:4 & 17:13 & \\
\hline use (5) & 40:15 & years (7) & 21st (1) & \\
\hline 12:2;22:20;27:12; & \[
\begin{array}{|c}
\text { wellbeing (1) } \\
23: 3
\end{array}
\] & \[
\begin{aligned}
& 18: 20 ; 20: 15 ; 25: 21 ; \\
& 32: 6,22 ; 38: 22,23
\end{aligned}
\] & \[
\begin{array}{|c|}
10: 18 \\
\text { 25-cent (1) }
\end{array}
\] & \\
\hline 33:17,23
used (1) & wetlands (1) & yesterday (3) & 33:7 & \\
\hline 27:20 & \[
\begin{gathered}
23: 10 \\
\text { what's (2) }
\end{gathered}
\] & \[
\begin{gathered}
15: 5,5,11 \\
\text { you-all (1) }
\end{gathered}
\] & 3 & \\
\hline using (3)
\[
25: 9 ; 28: 4 ; 34: 7
\] & \[
38: 24 ; 39: 6
\] & \[
28: 6
\] & 3 & \\
\hline utilities (1) & who's (1) & & 3,075 (1) & \\
\hline 29:1 & 16:25 & 1 & 16:25 & \\
\hline \[
\begin{aligned}
& \text { utility (2) } \\
& 8: 13 ; 28: 3
\end{aligned}
\] & 23:24 & 1 (1) & 4 & \\
\hline V & 21:12 & 1:00 (1) & 4,464 (1) & \\
\hline & wind (5) & 4:5 & 16:21 & \\
\hline value (3) & 8:6,11,12;12:14; & 1:49 (1) & 40-mile (1) & \\
\hline 39:5,13,15 & 17:4
win-win (1) & 40:18 & 23:5 & \\
\hline \[
\begin{gathered}
\text { values }(\mathbf{1}) \\
39: 4
\end{gathered}
\] & \[
\begin{array}{|c}
\text { win-win }(\mathbf{1}) \\
17: 7
\end{array}
\] & \[
\begin{array}{|l|}
\hline 10(1) \\
16: 25
\end{array}
\] & 6 & \\
\hline Vanderbilt (1) & wise (1) & 100 (1) & & \\
\hline 32:6 & 28:2 & 20:22 & 63103 (1) & \\
\hline variable (1) & wish (2) & 11 (1) & 5:6 & \\
\hline \[
\begin{gathered}
25: 7 \\
\text { versus (1) }
\end{gathered}
\] & \[
\begin{array}{|l}
\text { 4:17;16:12 } \\
\text { within (2) }
\end{array}
\] & \[
\begin{gathered}
25: 21 \\
\mathbf{1 1 0} \text { (1) }
\end{gathered}
\] & 7 & \\
\hline 33:19 & 23:4;31:20 & 16:6 & & \\
\hline violates (1) & without (1) & 14th (1) & 7,312 (1) & \\
\hline 23:23 & 31:13 & 23:21 & 16:23 & \\
\hline violating (1) & witness (19) & 15,000 (1) & 700 (3) & \\
\hline 23:10 & 7:6,20;9:4,15,23; & 23:22 & 16:13,23;17:1 & \\
\hline violations (2) & 11:9,18;13:11;14:1; & 154-acre (1) & & \\
\hline \[
7: 18,21
\] & 18:14;20:11,15; & 23:19 & & \\
\hline
\end{tabular}```

