Webinar Replay: There's No AI Without Infrastructure

November 4, 2026

Mark Marifian (00:00):
Good morning, good afternoon everyone. Welcome to our special webinar focused on AI infrastructure. My name is Mark Marifian. I'm the head of product here at Tortoise. It's a pleasure to have Rob Thummel, who's our senior portfolio manager joining us today. So we do have a prepared agenda, but given that we have some volatility in the markets today, let's go ahead and we'll get Rob in the beginning to talk about what's happening in terms of performance and related to the midterm elections and our overall outlook. Then we'll get to the prepared agenda. Just a quick background on Tortoise for those who haven't joined before, welcome. Our expertise is in energy and infrastructure. We've been doing this for two decades. Our platform today manages 11 billion. That includes seven ETFs, that's up from two in 2024, and those ETFs are approximately about two billion today. In August of 24, just for a little background, we launched TCAI, which is Tortoise AI Infrastructure ETF, and that strategy really focuses on the convergence of energy data centers and the technology, the digital infrastructure inside the data centers.
(01:26):
So we see this with 500,000. We've seen assets grow to almost 300 million. Today, we're closer to 200 million in overall assets, but we've certainly seen a lot of investor interest around this infrastructure that's required to support AI and power demand. And certainly with the blue wave that we had yesterday, I think the question that's really at the top of everyone's mind is, did the midterm elections change your outlook for AI, AI infrastructure and the overall opportunity for growth here? So Rob, welcome. That's the intro here and hopefully you can just start addressing the question there.
Rob Thummel (02:13):
I'll get started. Hey, thanks Mark, and thanks for everyone for joining us. And obviously the question on everybody's mind is, okay, what's the impact of the midterm election on energy, on data centers? Obviously the market's talking to us right now, and at least as of right now and in the last couple days, there's obviously been some concern over the build out of AI infrastructure as a result of these midterms and maybe some of these governor's races. And in fact, we think it's probably more the governor race in Texas rather than the midterms. But big picture from a macro perspective, we do just not see this midterm election results really having a material change on the long-term outlook for the US energy sector. If you think about what could happen, we may see some potential relief at the pump. There are some geopolitical developments that may help us as a result of this election outcome.
(03:11):
And what I mean by that is potentially some resolution or movement in the conflict with Iran or some resolution with Ukraine. All of those potential outcomes because of this election could ultimately lower the gasoline price, lower the oil price a little bit, and obviously lower diesel prices. Hey, from that perspective, that's probably a positive potentially for long-term inflation. And so although maybe short-term difficult, long-term, we think it's a real positive. Data centers, the other thing that I should say is data centers, we still think that data centers are still going to be really critical. We're going to talk here in a few minutes about the number of gigawatts that we need to add of electricity, 166 gigawatts of electricity between now and 2030, a trillion dollars of capital spending. Those numbers aren't changing and those present some opportunities and we have had some stocks that have gotten beaten up, frankly, and we're looking very closely at all of those and making sure our thesis is right.

(04:17):
But we feel that the long-term thesis for electricity demand growing, electricity becoming the new oil, and data center capital spending growth will continue to be there. And we'll talk a little bit more about that here in the future. The other thing I would say is if you look at the energy sector, the US oil and gas production is going to remain resilient. US is going to win this global AI race because of US oil and in particular US natural gas. So we don't see that changing. The US will maintain its leadership as the largest producer of oil and gas in the world. The US will maintain its leadership as the largest export company in the world. And whether we're investing in energy infrastructure, energy companies themselves, or even these new emerging AI infrastructure companies that are going to really provide a long-term secular tailwind for the energy sector, none of these fundamentals have changed as a result of this midterm election.
(05:15):
So with that, Mark, let's go ahead and get started.
Mark Marifian (05:20):
Yeah, we'll pull up the slides just for a frame for everyone. Again, please feel free to ask questions and the way we do that is we type them in the chat and we'll be able to check them out at the end of the presentation. Couple poll questions in there to just get the audience's pulse on issues related to the data centers overall. Here's the agenda. So couple high level slides on why electricity is new oil. Then we have about five slides or so around the infrastructure behind AI. Then we're going to pivot over into the product universe related to AI products and there's a lot there. And then finally, we'll go through TCAI itself. We'll start with the process and talk about the investment process that we go through and then we'll get to ultimately the portfolio itself. So Rob, I'll pass it to you, but breaking out into those four different sections.
(06:21):
So let's go ahead and jump into the first section, which is electricity is a new oil.
Rob Thummel (06:27):
Okay. So we're learning about change. Obviously we learned last night in the midterms that there's change on the way, and oil has been the dominant source of energy though, if you think about it, really for the past 60 to 75 years. But with the advent and evolution of AI, things are changing. And now what we see is on slide two, which is we think at a tortoise electricity will become the new oil. AI is going to be the next economy. AI is the next industrial revolution. And with that comes a lot more electricity demand. And you can see that here on slide three.
(07:07):
One of the things that I wanted to point out is when you look at AI going forward, electricity demand, I mentioned it from the top, this has not changed and has not changed and it probably won't change. It probably only goes higher. 166 gigawatts of electricity demand needed between now and 2030. How much is that? What is that? That's 15 New York cities. That's two times the Texas record peak. You can see this on the right, we're going to grow electricity consumption at 5.7% a year between now and 2030. These numbers really are difficult to comprehend for a long-term energy investor like me because for my majority of my 30 years of investing in energy, electricity demand has been zero. And we now have a brand new long-term secular demand driver of electricity demand growth that's going to propel this energy sector and set up lots of different companies going forward.
(08:14):
What's driving the change really are these big numbers. You can see the 166 gigawatts. You know what the numbers are and you know the significance of that. So the other factor is on the next page. Look on the next page. This is the other factor that we remain confident. We know we're going to need more energy infrastructure. We believe from the previous page that natural gas is going to drive all of that electricity demand going forward. From an AI perspective, an AI infrastructure perspective,

we feel very confident we're going to need a lot more AI infrastructure. We'll talk a little bit more about how we get there in a second, but this page captures it. If you look at where is capital spending going, once again, this slide is the same as it was before the election. It'll be the same and probably once again, just go up in terms of capital spending.
(09:06):
But we've gone from when ChatGPT was founded in 2022, 23, $150 billion of hyperscaler capital spending to over a trillion dollars this year. Next year, hyperscaler capital spending forecasted to grow. I think it's by over 60%. We're going to be over a trillion dollars for several years in a row now. That's really important because that really means that we need more AI infrastructure to support and win this global AI race. And we will win this global AI race because we have the opportunity here in the US. So the question is then is what are people spending money on? Well, let's talk about the infrastructure behind AI. And for that, let's move to slide six. Okay, so slide six. The capital that's being invested to win this global AI race is really captured and being spent and invested in what Jensen Wong has described and what we tried to show you here or illustrate for you here as the five layer cake.
(10:15):
All these layers work together, but the five layer cake that Jensen Wong's talked about at the top of it is applications.
(10:27):
The next level down are the models. Next level down is infrastructure, chips, and then the foundational level is energy. The foundational level is energy. So the way to think about this is from the top down. The applications don't work without the models. The models don't work without the infrastructure. The infrastructure doesn't work without the chips. The chips don't work without energy or electricity. What do we know a lot about here at Tortoise? I'm sure you've all been following us, but if you haven't, we know we've spent a lot of time on the energy sector. We really focus on being the energy experts and we've been investing in the energy sector for over two decades, and so we know a lot about that. We also know Tortoise knows a lot about infrastructure. And so for TCAI, what we focus on is obviously combining that energy expertise with our infrastructure expertise, because as we've looked for opportunities for investors as we've analyzed the potential of AI and how it's going to present investment opportunities, we found many infrastructure investment opportunities and that's where we focused with TCAI and we combined the infrastructure opportunities in technology with the infrastructure and energy opportunities in electricity and power.
(11:53):
And that's really the crux and focus of TCAI. And a lot of this was laid out in a white paper. We were early on in looking at this. Mark and I and Eva and the team prepared a white paper back in early 2024 that highlighted the potential that AI was going to have in this long-term secular trend that we thought that AI could have and be a long-term driver for the energy sector going forward. Okay, go to the next slide though. What are we talking about and what are we investing in on the infrastructure side? What are we talking about and what do we invest in? Well, we invest in data centers. Data centers obviously have been a source of discussion. The election, everybody probably heard multiple commercials about data centers. Do we want data centers? If we're going to win the global AI race, the winner of the global AI race is going to need data centers.
(12:50):
We've seen this before with pipelines too. There's been opposition to pipelines. There's been opposition to data centers now. Usually what happens is then, or what we think will happen is only the highest quality data centers will be built. If there's going to be opposition, if there's going to be a little more regulation, which is possible, not for sure but possible, then only the highest quality data centers will be built. That significantly reduces the risk factor that many were talking about, which is overbuilt.

This election, if it does one thing, it probably reduces the possibility of overbuilding data centers because it'll just take a little bit longer to build all of these data centers. But I can't reiterate enough, if we're going to win this global AI race, and I don't think it matters what political party you are, I think it's really important that everybody in the US believes we need to win this global AI race.
(13:40):
To do that, we need data centers. That's what we invest in TCI. That's one of the core. Not only do we need data centers though, we need what's inside those data centers. So what am I talking about? What's inside the data centers? Memory, storage, liquid cooling. We're talking about cables, fiber. We're talking about things like network switches, all of these component parts. Think about it as the picks and shovels inside these data centers. Need these data centers. You need this information inside these data centers because ultimately, and I think we've got that depicted on the next page at the crux, at the foundation of AI, what is it all about? It's just all about data, which is captured in the data centers and energy, which is captured by all of the electricity that's being built in that 166 gigawatts that we have to expand. And if you don't believe me, you know what, and you can believe me, but I would also encourage you to look at this anthropic IPO.
(14:46):
I've written all over my copy. I've read it all. But if you look in the anthropic perspectives, it's filled with risk factors that highlight what we're doing at TCAI and at Tortoise in general.
(15:04):
More compute is needed. There's concern about fuel and power constraints. Well, energy sector, the electricity sector, the energy infrastructure sector can handle all that. Power solutions, off the grid power solutions are needed. Well, we've got companies we're investing in TCAI and across Tortoise that are providing power solutions, whether that's behind a meter or in front of the meter. And then lastly, data center infrastructure. The prospectus of Anthropic talks about the risks of not enough data centers and not enough component parts inside those data centers, not enough picks and shovels, and that's what we're capitalizing on within TCAI. What do we see happening? Let's go to the next slide real quick. Here's what's happening in AI infrastructure, and we'll talk a little bit more about our investment process in a second, but generally speaking, you've got demand for compute rising dramatically, and that's reflected on this chart on the left.
(16:12):
I'm sorry, the demand for compute is rising quite substantially. The supply to keep up and maintain that demand needs to be this infrastructure. It needs to be chips, memory, storage, and data centers. And we've all seen what happens when demand and supply get out of balance. We've seen that tortoise in the markets forever in oil and natural gas and other markets. But when you are undersupplied in a particular product and you have rising demand, well, what happens is you see gross margins rise dramatically. And look what's happened in some of the names in TCAI on the next page. You've seen, you get significant increases in gross margins, microns, gross margins reported by the SEC or reported on their last reported 10Q. They've risen from 37% a year ago to 85%.
(17:18):
When you combine those rising gross margins with the increase in demand for things like memory and storage, that results in significant earnings per share growth. And we've seen that and you've seen that in Micron. You can say the same thing with the beloved Nvidia who's seen its margin rise dramatically. Vertiv, Micron, Seagate, all have experienced the same thing, and that's what we're looking for in Tortoise. Industries, sectors, segments that are undersupplied, but have this significant growth in demand. And that's really what we found, and we'll talk about a little bit about how we're doing that going forward. But before we do that, I'm going to turn it over to Mark to talk a little bit about other competitor products and how we're faring against those products. So Mark, take it away.
Mark Marifian (18:06):

Yeah. So been in product now 15 years and tracking the proliferation of products around AI has been unlike anything I've ever seen. And so what I don't want to do is tell you what you should do. What I want to do is just lay out the investment product universe for everyone to see what is out there and just see how much is out there. And maybe ultimately what you'll get to see is that we have a very different approach than what the majority or where the majority of the dollars are at today. So go to the next page. Okay. So basically what Rob has been talking about, we've broken it out by some of these sub-sectors. So when we ran this at the end of October, get $320 billion in just ETFs of AI related investment product. By my tally, it's 96 products are in the market.
(19:12):
So you can just see the broad depth of how many products are out there. Not a surprise, chips and memory have the majority of the assets at about 150 followed by broad AI infrastructure. And those are some of the more legacy funds, some that have been around for a little bit longer than the last couple years. Then you've had several funds come out and focusing on specific sub-sectors. So you've seen power and grid focused ETFs, you have data center build out and equipment, so more focusing on the data centers themselves. Then you're looking at these end inputs, whether it be robotics or the software, the digital side of it towards the end of the value chain. What are we doing? What's our approach? It's just different than all those. We're not focusing on a specific sector, but we're focusing broadly across all the applications and infrastructure across the value chain.
(20:14):
It's a very small competitor list that are doing up and down the value chain. But the reason we got here is just because, as Roz mentioned a couple times, we've had to understand the full energy value chain. And so really that's the same approach, and we'll get into this here in a couple of slides, that we're looking at and we're adopting from that we've used over the last 20 years investing across a value chain of energy. Here we're just reapplying it towards the AI infrastructure universe space. On the right side, you guys can just see the sheer launches of ETFs that we've seen per quarter. And I just started this from Q3. When TCAI launched, we had four, four, seven, 13. Q3, you had 19 new ETFs come to market. So point being is there's a lot of noise out here. What I just want to do is just present for you all the different ways you can access the space.
(21:13):
And our approach is just really focusing across the broad value chain versus specific sub-sectors. That doesn't mean we won't take views, and you'll see that in a couple pages as well, how we have been able to shift the portfolio opportunistically over the past couple years where there's been the run-up in chips, the run-up in power and grid related to the Bitcoin miners. We've had several different iterations of different sectors leading, and so that's our opportunity to lean in to our expertise where you have that supply and demand mismatch and tilt the portfolios to the places that we want to be. You go to the next page.
(21:55):
Oh, and let's go back. Sorry. We did want to have a live poll, and for those on, if you do own AI, what bucket are your clients owning today? And so we just showed the list, chips memory, big tech, and a broad AI, power and grid focus, the data centers, software and robotics or the infrastructure across value chain, which of course would be TCAI. Okay. Split, Rob, but not surprised we have a few on the infrastructure across the value chain given it's a TCAI call. But yeah, not surprising that 50% are in chips and memory and big tech and broad AI. Frankly, that number is even higher in terms of the dollar amounts, but that's where the majority of the $320 billion are at today. Okay, we can go to the next page just on the product universe. And it doesn't matter. AI is synonymous in many different forms, but what I try to show on the left-hand side is you're getting vastly different return outcomes depending on what sub-sector or value chain approach you're taking.
(23:15):

And so you can see that 23% of the 70 ETFs that have a full year history are below water, and you have 10% on the other side of the bellwether barbell that are above 50% returns for the year when we ran this. And the vast majority of the settling in the middle is 23% of all AI ETFs are between 20 and 30% returns for the year. And then on the right-hand side, we can see Rob talked about the bottleneck with chips and memory. That's played out year to date. We haven't pulled back today, but broadly speaking, that's where the majority of the returns have been driven from this year, followed by the broader AI approach, followed by data centers, and actually power and grid, more tortoise's legacy expertise, that's been the laggard year to date. So point being that you got a lot of options out there.
(24:17):
Just wanted to frame for everyone the different ways you could potentially take an investment in AI ETFs. And so we'll continue on here.
(24:32):
And then we talked about electricity and the power side. We talked about the infrastructure inside it. We framed for you all the investment product universe. Now we just want to dive specifically into TCAI, how we've managed it, what we own, and how it can be additive to your overall portfolio. So go to the next slide. Rob, what we did is simplify our big investment process. This is normally several slides, but what we wanted to do is put it in a concise manner. Rob's the right person to talk to it here. He can go through our process in a bit more detail and talk about how we do the day in and day out picking.
Rob Thummel (25:19):
So this is really important. Obviously, it's a huge universe that we have to pick from. We've got 220 companies that we identify that have some exposure to AI, and we've had multiple opportunities, including today, to figure out on days when the stocks melt down or when they melt up like they did yesterday, we can see are we missing anything? Who's got the most exposure to AI? And then try to look for those that may have some catalyst coming that would pique our interest. But we started with 220 stocks. It's a big universe. I think it's what, over $40 trillion, I believe.
(26:00):
And from there, we've tried to utilize a process, the investment process and implement and adapt an investment process that we've used here at Tortoise for decades, as long as I've been here, for two decades. And it captures the expertise of our portfolio managers and our investment team and the portfolio team that has worked together utilizing this investment process now for, in most cases, over 20 years. So what is it? Well, we start with the universe, the AI universe. Like I said, we end up with 220 companies and organize it for ourselves. We break it down, that universe, down into, let's say, segments, and we've got 12 segments. And then with those 12 segments, we perform a top-down analysis. And you can see, what does that mean? Well, that means we look at each individual segment. So what's a segment? Well, memory and storage is a segment.
(26:55):
Data centers are a segment. Those are two of the segments. But we look at all of those segments, we rate them, our team, and we go through this at the portfolio management meeting every week. We rank these from basically negative one to positive one. And what we do or what we're ranking them on is on the sentiment around the various segments, the valuation of the segment, and the fundamentals of the segment.
(27:26):
After that, we take our favorite segments basically, or our highest rated segments with the higher number and the more positive number that would be the highest rated, and we come in and we do a bottoms-up approach. So we know the segments we like, so maybe we like memory and storage. So then we come in bottoms up and say, okay, well, what companies do we want to own? Okay, well,

what are we looking for there? We're looking for things, because talking about earlier, we're talking about the classic things you've heard us talk about here at Tortoise Forever, management quality, cash flow stability, cash flow quality, alignment with the management teams. We look at sensitivities and commodity price sensitivities. What is commodity price? In the pure case of oil and natural gas, in a lot of these infrastructure names, it's not commodity price sensitivity. We look at then the relative value relative to the peers in the index, and we try to find those companies, once again, that are operating in industries and segments that are under supplied and have growing demand.
(28:32):
And what we've seen is we've seen growing gross margins. So the classic example is Micron in memory and storage. We love the memory and storage sector. If we're going to move into more and more and do more and more robotics, driverless cars, you're going to need more memory and storage, you're going to need a lot of memory and storage. And companies like Micron who are providing that key core product are operating in a growing market and an undersupplied market and the margins are rising. And so it's a company like Micron that you see in our portfolio in a reasonable weight. How do we decide the weights and the positioning? It's based off of what's going on with the risk tiers. It's the same thing we've used for years at Tortoise. We evaluate every single company and assign it a tier one, two, three, or four.
(29:21):
You can see our tier one, we think offer some of the lowest risks and we can own up to 7.5% of those. Tier fours, probably some of the highest risks, and we don't own those at all. So that's how we go about the process of figuring out what we own and really how we develop the portfolio. Go to the next page and we can see how we've changed the portfolio over time. I'm sorry, let me come back to that. Let me say, here's what we own. I should say that first. Here's what we own. Here's the portfolio and its makeup. You can see some of the segments, the industries on the right side. We own digital infrastructure, energy and Data centers. Then on the right though, you can see what are those segments within energy? It's power generation, natural gas supply. You can see what data centers, you can just see what we're investing in in data centers.
(30:11):
We're investing in not only just the traditional data centers, but AI data centers that in some cases were transformation stories. They were the Bitcoin miners, formerly the Bitcoin miners Mark was talking about. Digital infrastructure, we're investing in memory storage, network and optic. Optical networking is a popular one. Servers, servers and network switches, cooling. Cooling is an interesting one as well. SpaceX recently got into the CapEx game and they're going to spend a lot of CapEx, obviously as you can imagine, to build out an AI platform within SpaceX. But what do they say? What AI must say? Well, one of the fundamental undersupplied areas or bottlenecks is cooling. So that's an area that's really drawn interest of ours. And we've looked at companies like Vertiv and Modine that are listed here as opportunities to potentially see significant growth in demand and potentially we'll see what happens with supply as well in terms of the growth.
(31:11):
So over time then I think if you go to the next page, you can see that's where I was getting at how we've changed the portfolio.
(31:19):
We've weighed the portfolio historically, at least initially pretty heavily on data centers, at least initially. And over the time it's evolved, the sector... Actually, I'm sorry, we originally balanced it with energy, data centers and technology, and over time it's evolved. And today we still have those core three segments, I guess, within the portfolio, but you can see the mix has changed quite a bit. I think our average turnover for the year, if you go and do the math, I think it's about 70%. So we're continually always analyzing, using our investment process to analyze the opportunities that we see and making

changes where we see whether it's a company who's exceeded our model weight or more importantly, some fundamental factor that's changed that results in us reweighing a particular security from maybe one sector to another or one industry or another, or some fundamental change in that industry from that top down analysis or a change in that bottoms up analysis in the profitability and the potential EPS growth of the companies.
(32:29):
Okay, so we're almost done I think, but Mark, do you want to talk about the next slide?
Mark Marifian (32:36):
Yeah, just a couple quick ones on how this could fit from the portfolio. Here we have comparison of the Mag seven, obviously a huge part of the broader market. TCI holds 1% of the Mag seven, that's just been Nvidia, but you can see the stark difference there. We also showed on the right-hand side that the correlation of weekly returns since inception for TCAI, you have some pretty high correlation with the semiconductor index. Not surprising, we've increased our exposure more towards chips, some correlation with the NASDAQ, but it starts to fall off pretty significantly when you get onto the utilities and the midstream side of things. And a question we do have on the poll side, if you were to consider TCAI, where would you fund this from? Where do you put this in? Is it the technology and growth equities it's coming from? Is it coming from just your broader market allocation?
(33:42):
Would you rather own this than energy infrastructure or energy equities or come from other thematic investments or would this be a new allocation? Maybe you're pulling it from cash based on the recent market activity.
(33:58):
It's spread across the board here, Rob, but interestingly, energy and infrastructure is where it would be getting pulled from. So always helpful to see how people or investors are thinking about their different options and where this can fit into the portfolio. All right, one more I believe just on... Yeah, so just kind of a fact sheet, term sheet, if you will. Actively managed, as you all have surmised, we launched this in August of 2025, a little over $200 million in assets, 46 holdings. The expense ratio is at 65 basis points. We added this one because I do think that this is a notable one, but the number of advisory firms, those that would count in the 13F, it's up from four a year ago to 51 in our last required filing. So the word is starting to get out from the investment community and that's reflected in that 51.
(35:07):
Rob, I though maybe you could just quickly talk about Dell. We haven't hit on Dell much, but that's a story we've covered and done some case studies. Why was that our top weight as we went into the end of third quarter?
Rob Thummel (35:22):
Yeah, Dell's a classic example of what we're trying to do with that investment process, and it's worked out for us very well. So what we were looking for in our investment process is we really like the opportunities really in the servers market as AI infrastructure. If we're going to do robots, if we're going to use more autonomous driving, you're just going to need a lot of servers. And in our research, in our fundamental research, and this is the funnest part of the job, is we're able to find companies that are being represented in the market or being valued in the market for being one particular type of company when in fact then we do the analysis and we do the modeling and we figure out what they're going to transform themselves into another type of company. Dell was a classic example of that. Everybody thinks of Dell, they think computer, they think they're computer.
(36:19):
Computer demand goes up 1% a year. Dell is not a computer company. We recognized very early on that Dell actually is an AI infrastructure company. They're building AI factories for small to medium-sized businesses for the government.

(36:36):
That business with these AI factories and their servers that include a lot of the components of AI, it was growing at double digits, it's 30, 40% a year. So all we needed was time. Well, because we saw this coming, we made a big investment in Dell, made it our number one holding at TCAI. As the results played out, we saw the growth materialize out of the non-PC business. And as a result, while Dell was trading at a multiple initially of a low growth non-AI exposed business, once the market realized it's not a computer company, it's an AI infrastructure company. The multiple raised, obviously the earnings per share is growing now and Dell is entirely... Well, obviously it's performed very, very well for the year as well, but it's an entirely new company. It's transformed its business model and into the future it's viewed as an AI infrastructure company, which provides it a lot more benefits from a valuation perspective.
(37:44):
And so that's why it's our number one holding and we still see tremendous opportunities for growth as the market becomes more and more familiar with the fact that Dell is more of an AI company and not a computer manufacturer.
Mark Marifian (37:58):
Great. Thanks, Rob. So that concludes the prepared remarks. We do have a few questions that have popped in and I'll jump to those. Rob, first one, if you were to see a adjustment to the overall CapEx growth rate and say it was to go down, do you see a specific part of the portfolio where you would likely increase versus decrease? Maybe we take this from the energy perspective, the technology perspective and the data center perspective.
Rob Thummel (38:38):
Yeah, I think where we're going to go is probably the technology perspective. Some of maybe the memory storage, maybe the heating and cooling we would see, but if you see a slowdown, I think that's where you're going to see the spending drop off a little bit, if we do. Keep in mind, the one place I don't think we're going to see a slowdown is in energy, electricity. It's still that base of that five layer cake. And I still think that the US really has an opportunity to lead in AI and it has an energy advantage in AI because we have low cost natural gas that can produce low cost electricity that can allow the US to win this global AI race. And so from our perspective, if we did see a slowdown in CapEx, it probably comes out of less spending on some of the technology infrastructure, the digital infrastructure before it does the energy.
Mark Marifian (39:31):
Rob, I guess the first question is, are we buying today? And then maybe could you talk broadly about your thoughts on the energy services groups, specifically Quanta, if you had any thoughts on that sector overall?
Rob Thummel (39:47):
Yeah, that's a good question. Well, I mean obviously we're a mutual fund, sorry, we're an active ETF, I mean, so we're buying every day to a certain extent, and we're always looking at repositioning opportunities. Obviously that's what we do as active ETF managers. The services names, yeah, that's a very good question. Those names have been hurt and I think they've been traded down because of the concerns about what's going on with data centers before the election and really the lack of popularity or the declining popularity of data centers, because what a lot of these Qantas and Primoris and other energy services names are doing are building, whether it's equipment or they're building the facilities for the infrastructure, whether it's energy or the electricity. And so as there became more concerns about the pace of expansion of data centers or the opposition to data centers, that called into question the future backlogs of some of these companies.
(41:03):

They've all reported some really, really good backlogs basically from a project backlog perspective, and so we still like the names, they're still in the portfolio, and I think you'll continue to see us look for opportunities across the value chain, including this area, as we see these stocks move in reaction to what went on last night with the midterms.
Mark Marifian (41:28):
It's funny just how much demand there's been in services. I think about the oil field services companies that are reorienting their business and basically building out a power services division to play in the electricity build out. So yeah, I think that answer's spot on. One more, Rob, before we let everyone jump, and this is a good one to end on, will the Blue Wave impact the energy sector by increasing sustainable options again?
Rob Thummel (42:03):
Yeah, no, I think that we figured out in the last maybe four years or eight years that we have an energy advantage in the US, and that's US natural gas. There's an ample supply of natural gas. There is a plethora of natural gas that we have so much natural gas that we're exporting to countries. In fact, so much that the US, you probably saw this recently that Shanier is actually going to export natural gas to Qatar for 20 years into the 2050s and beyond. That to me just shows you how much natural gas we have. Qatar is the second largest LNG exporter in the world. The US is number one. Qatar is going to buy natural gas from the US. So the answer is I think the natural gas, we think at Tortoise that the natural gas is the big winner, will continue to be the big winner, and you'll see low-cost natural gas drive low-cost electricity, and it's the low-cost electricity that wins this AI race.
(43:08):
That's what you need, is low-cost electricity because that's where these data centers will be built, and that's where the energy and the data center infrastructure will be built, and that will all be here in the US, and I don't think that you're going to see a lot of renewables being able to compete to provide steady, stable electricity that's reliable on a 24-hour day basis, seven days a week, and the big winner of that will be natural gas.
Mark Marifian (43:41):
Great. That's a good one to end on. That said, one more came in. Rob, you got time for one more?
Rob Thummel (43:46):
Of course.
Mark Marifian (43:47):
Okay. Many data centers are being built or targeted in Texas and Ohio. So can you talk about, and maybe it's too early to opine, but what effect will the election have on these states?
Rob Thummel (44:05):
Yeah, no, I think it's a good question. I think that's some of the reason why you're seeing at least a temporary selloff today in some of the AI stocks, in particular, AI infrastructure stocks because of the change in the governor in Texas. I think that has caused some concerns about will this cause a slowdown in the AI build out? Obviously, Texas is a state that's got very low cost natural gas. Out on the Permian Basin, natural gas is actually... Well, it's been below a dollar for much of the quarter because of the excess supply of natural gas. And so we still see Texas as an important component in building out a lot of these data centers. Now, what we also see in Texas potentially is you've got some regulatory requirements that will be in place. Will those increase? I don't know.
(44:59):
I'm not sure, but what I do know is, back to my original comment, I do think that the quality of the data centers that will be constructed now will be much higher. And so we're going to get some of the best data centers that are going to make it through all the regulatory processes. The concern about overbuilding probably becomes lesser because of what happened in the state of Texas, and now we have a new governor, but we'll see what happens. We'll watch that very closely. Obviously, keep

following up with us, and we'll probably have podcasts and address this in a lot of our quarterly updates and monthly updates as things evolve.
Mark Marifian (45:38):
Certainly, it's dynamic. It was timely to have this conversation today, Rob, so really appreciate you sharing your thoughts, really appreciate the audience joining us today. We'll continue to look forward to bringing educational material. We do have monthly webinars as well where we will cover energies and AI as well. So be on the lookout for those invites via email, and we hope everyone has a great rest of the day and talk to you soon.

Disclaimers:

This transcript contains certain statements that may include “forward-looking statements.” All statements, other than statements of historical fact, included herein are “forward-looking statements.” Although Tortoise Capital believes that the expectations reflected in these forward-looking statements are reasonable, they do involve assumptions, risks and uncertainties, and these expectations may prove to be incorrect, Actual events could differ materially from those anticipated in these forward-looking statements as a result of a variety of factors. You should not place undue reliance on these forward-looking statements, which speak only as of the date of this publication. Tortoise Capital does not assume a duty to update these forward-looking statements. The views and opinions in this commentary are as of the date of publication and are subject to change. This material should not be relied upon as investment or tax advice and is not intended to predict or depict performance of any investment. This publication is provided for information only and shall not constitute an offer to sell or a solicitation of an offer to buy any securities.

Performance quoted represents past performance and is no guarantee of future results and may be lower or higher than quoted. Investment return and principal values will fluctuate so that when redeemed, shares may be worth more or less than original cost.

Tortoise Capital Advisors, LLC (TCA) is the advisor to the Tortoise AI Infrastructure ETF.

Before investing in the fund, investors should consider their investment goals, time horizons and risk tolerance. The fund’s investment objective, risks, charges and expenses must be considered carefully before investing. The statutory prospectus and the summary prospectus (click here) contain this and other important information about the funds. Copies of the fund’s prospectus may be obtained by calling 855-994-4437 or by emailing info@tortoisecapital.com. Read it carefully before investing.

As stated in the Prospectus, the total annual operating expenses are 0.65%. The adviser has agreed to pay all expenses incurred by the fund except for the advisory fee, interest, taxes, brokerage expenses and other fees, charges, taxes, levies or expenses (such as stamp taxes) incurred in connection with the execution of portfolio transactions or in connection with creation and redemption transactions.

Investing involves risk. Principal loss is possible. Because the fund is “non-diversified” and may invest a greater percentage of its assets in the securities of a single issuer, a decline in the value of an investment in a single issuer could cause the fund’s overall value to decline to a greater degree than if the fund held a more diversified portfolio. The fund’s strategy of emphasizing investments in AI infrastructure companies means that the performance of the fund will be closely tied to the performance of one or more industries that are expected to benefit from the growth of AI-capable data centers and related technology and energy infrastructure. Investing in companies that are expected to benefit from the same macro theme means that some of the fund’s investments may be similarly affected by certain market, economic, political, or social developments. Companies in the energy infrastructure sector are subject to many risks that can negatively impact the revenues and viability of companies in this sector, including, but not limited to risks associated with companies owning and/or operating pipelines, gathering and processing assets, power infrastructure, propane assets, as well as capital markets, terrorism, natural disasters, climate change, operating, regulatory, environmental, supply and demand, and price volatility risks. Companies in the technology infrastructure sector are subject to many risks that can negatively impact the revenues and viability of companies in this sector, including, but not limited to risks associated with emerging technology that renders existing products or services obsolete, reliance on outdated technology, intellectual property theft, supply chain disruption, vulnerabilities to third-party vendors and suppliers, business interruption, difficulty in retaining skilled talent, and regulatory compliance. Companies in the industrial sector face a variety of risks, including commodity price volatility, supply chain disruptions, potential obsolescence of technologies, economic downturns, and increasing competition.

Investment advisers, including the Adviser, must rely in part on digital and network technologies (collectively “cyber networks”) to conduct their businesses. Derivatives include instruments and contracts that are based on and valued in relation to one or more underlying securities, financial benchmarks, indices, or other reference obligations or measures of value. If the fund writes a covered call option, during the option’s life the fund gives up the opportunity to profit from increases in the market value of the security covering the call option above the sum of the premium and the strike price of the call, but retains the risk of loss should the price of the underlying security decline. Investments in securities of foreign companies involve risks not ordinarily associated with investments in securities and instruments of U.S. issuers, including risks relating to political, social and economic developments abroad, differences

between U.S. and foreign regulatory and accounting requirements, tax risks, and market practices, as well as fluctuations in foreign currencies.

The fund may be exposed to liquidity risk when trading volume, lack of a market maker, or legal restrictions impair the fund's ability to sell particular securities or close call option positions at an advantageous price or in a timely manner. Illiquid investments may include restricted securities that cannot be sold immediately because of statutory and contractual restrictions on resale. Mid-cap and small-cap companies may not have the management experience, financial resources, product or business diversification and competitive strengths of large cap companies.

Shares of exchange-traded funds (ETFs) are not individually redeemable and owners of the shares may acquire those shares from the ETF and tender those shares for redemption to the ETF in Creation Units only, see the ETF prospectus for additional information regarding Creation Units. Investors may purchase or sell ETF shares throughout the day through any brokerage account, which will result in typical brokerage commissions.

There is no guarantee the fund will pay distributions in the future and distributions, if any, may be less than the current distribution.

Quasar Distributors, LLC, distributor.

Nothing on this website should be considered a solicitation to buy or an offer to sell any shares of the fund in any jurisdiction where the offer or solicitation would be unlawful under the securities laws of such jurisdiction.

Nothing contained in this communication constitutes tax, legal or investment advice. Investors must consult their tax advisor or legal counsel for advice and information concerning their particular situation.

NOT FDIC INSURED · NO BANK GUARANTEE · MAY LOSE VALUE