

Powering Michigan Session #1: A Look at Our Energy System and Planning Processes

Transcript

October 1, 2025, 9:29PM

Corrections in the transcription or other editorial comments can be found in [highlighted blue typeface](#).



Ryan R Lowry 0:05

Hello and thank you for joining us this evening. Our meeting will be starting in a couple minutes at 5:30.

Excellent. Well, hello and thank you everyone for joining us tonight. My name is Ryan and I support our customer communications here at DTE. Now I'll be your moderator for today's discussion. And I want to start by thanking you for joining us for this first session in our Powering Michigan series. Today's discussion will provide you with a look at our energy system and our planning processes.

First, a few housekeeping items. Closed captioning of today's presentation is available in multiple languages by clicking on the closed captioning symbol on the top right side of your screen. You can see that with the little arrow and the circle. Next slide please.

Questions or comments can also be submitted anytime during today's event by using the Q&A function on the top right side of your screen. We encourage you to submit your questions as soon as you have them, and we'll address audience questions and comments after the presentation. We also have several subject matter experts on hand to help answer questions.

But we know that your questions may touch on a number of different topics. If the appropriate expert is not present to answer a particular question, we will respond after the presentation by e-mail and [Q&A post](#) responses to our blog recapping today's presentation.

Next slide. This meeting is being recorded and transcribed. Copies of today's presentation, the recording, transcriptions and responses to questions will be posted and made available at dtecleanenergy.com.

So let's start with a quick review of today's agenda. Energy is something we all rely on, whether it's to power our homes, charge our phones, or keep businesses running. But behind the scenes, there's a lot of planning that goes into making sure the energy system works safely, reliably, and affordably for everyone.

DTE Electric regularly engages in two different planning processes, the Integrated

Resource Planning process and Distribution System Planning process. These plans shape the energy system in our community and guide DTE's work to generate and deliver the reliable and affordable energy you expect and deserve.

For these reasons, it's important for us to connect with our customers and other community stakeholders so we can learn what is important to you as we develop these plans. Today, we'll introduce you to how the energy system works, how we make or generate power, how we deliver power to your homes and businesses through the distribution system and how we plan for the future. Over the next few weeks, we'll be hosting two other information sessions. These sessions will give you a more detailed view of each of these two planning processes and how you can provide us with meaningful feedback.

So let me introduce you to DTE Electric. The company was founded in 1903 and generates and distributes electricity to 2.3 million customers in Southeast Michigan. DTE Energy, which is the parent company of DTE Electric, has nearly 10,000 employees, with approximately half of our workforce being represented by labor unions.

Our employees live and work right here in Michigan and are your neighbors and community members. In fact, we're very proud that our team members contributed more than 62,000 volunteer hours to over 750 community organizations right here in Michigan, helping make our state a great place to live and work.

So now let's transition to a video that shows how our energy system works.



Speaker 1 4:37

Electricity plays **is** an integral role in modern living, and although the power that lights your home arrives at the flip of a switch, there's a lot of work that goes into providing you with the safe, reliable electricity you count on. The power journey from where it's made to how it's delivered to your home can be divided into 3 parts. Generation, transmission and distribution. Let's start with generation. Electricity is made at power plants and nuclear facilities, as well as through wind and solar sources. Once the power is made, it begins its journey to your home on cables and wires called transmission lines. These tall towers and wires are like highways for electricity and are critical in moving large amounts of electricity over hundreds of miles from generation plants to your home or business. Similar to how you would add gas to your car before a long road trip, we must prepare electricity so it can travel long distances. We do that by increasing **or** strengthening the electricity's

voltage level. Once electricity arrives in your community, it makes a stop at a local substation. Substations are safely fenced in areas full of wires and large metal electrical equipment located in many communities.

This equipment is a lot like the electrical breakers in your home. Just as those breakers route power to different rooms in your house, substations help route electricity to different homes and businesses in your community. They also lower the electricity's voltage to levels that are safe to deliver to homes and businesses.

Now that the voltage has been safely adjusted, the electricity travels along smaller poles and wires called distribution lines. These DTE power lines bring electricity directly to your home. Using equipment on a utility pole or in your yard, the power's voltage is lowered one more time to a safe level for homes to use so you can charge your devices and turn on the lights. This process occurs 24/7 to ensure that our customers can enjoy safe, reliable power. Learn more about how we're working to deliver safe, reliable power at empoweringmichigan.com.



Ryan R Lowry 6:57

Great. So as you saw, the energy system is comprised of three parts, generation, transmission and distribution. Today we'll focus on generation or how energy is made and the distribution system, which is how energy is delivered to your homes and businesses. Sometimes the distribution system is referred to as the grid.

The third system is the Interstate Transmission System, which delivers energy across the country. These are the tall metal towers that you tend to see running through large open fields. While the transmission system is owned by a separate company, DTE customers pay for the use of this infrastructure through a regulated charge on your electric bills.

So in addition to talking to you about the generation and distribution system, next slide please, we'll also be introducing you to how we plan for the future of these systems. We use planning tools called the Integrated Resource Plan and the Distribution System Plan, and we'll describe these tools to you later.

Now I'd like to welcome Christina, who will describe how DTE is planning for our long-term generation transformation.



Christina J Hajj 8:00

Thank you, Ryan. Before I provide an overview of the generation system and our process for planning DTE's future energy mix, I want to first review the objectives that

guide our planning for both generation and distribution. We have 5 objectives you see here on the screen.

I'll step through each one. Safety. Safety is a top priority for DTE. Our objective is to build, operate and maintain our fleet in a manner that ensures the safety of the public and our workforce and meets all state and federal requirements.

Reliable and resilient. Having a power grid that is both reliable and resilient with minimal equipment outages and disruptions to our customers. Affordable, providing efficient and cost-effective service for our customers. Customer accessibility and community focus. Providing flexible energy options to customers and ensuring we have timely two-way communication with customers and stakeholders in all communities. And finally clean operating our system in an environmentally sustainable manner and achieving net zero carbon emissions, further enabling the decarbonization of our economy here in Michigan.

As of today, DTE's power plants, renewable facilities. Oh, can you go to the next slide, please? Thank you. As of today, DTE's power plants, renewable facilities and energy storage facilities can generate nearly 12,000 megawatts of power. You can see examples of different DTE generation resources on this page.

DTE operates 34 solar and 20 wind facilities across the state of Michigan. We co-own the Ludington Pump Storage Facility with Consumers Energy and we recently launched the operations of our first utility scale battery, the Slocum Battery Energy Storage System earlier this year.

We also have natural gas plants including Blue Water Energy Center and we are in the process right now of converting Belle River Power Plant from coal to natural gas. In addition to our natural gas plants, the Fermi 2 nuclear plant provides 24/7 energy. And once the Belle River Power Plant is converted to natural gas, Monroe Power Plant will be the last coal plant in our fleet. It is currently on track to retire in 2032. If you're a DTE Electric customer, the energy you are using right now is being generated through a mix of these resources. It's important to have a balanced and diverse energy supply. It allows us to economically optimize our energy fleet and support customer reliability.

As an example, wind and solar facilities are excellent ways to generate energy, but the wind isn't always blowing and the sun isn't always shining. Energy storage pairs well with renewables. Grid scale storage facilities charge when renewable resources are abundant and send energy back to the grid when it is needed. For example, our wind facilities produce abundant energy at night when customer demand is low. We

use this low-cost energy to charge the Ludington pump storage facility and we can then dispatch the stored energy when demand is higher during the day.

Dispatchable power plants like natural gas and nuclear are capable of producing energy 24/7 and can be powered up or down to meet customer demand. Next slide please. Thank you.

Energy needs can change from day-to-day and over time. Using your air conditioning in the summer, charging a growing number of electronic devices in your home, replacing old appliances with new, more efficient ones, and fueling up electric vehicles are examples of way that customers energy usage can fluctuate day-to-day and over time. We know that regardless of any changes in energy use, you expect the electricity to be there when you flip the switch. Energy is a just in time service, meaning we must produce and deliver the energy you need at the moment in time that you need it.

The State of Michigan uses a planning tool called the Integrated Resource Plan, or IRP, for generation planning. We are required by the state law to file an IRP with our regulator, the Michigan Public Service Commission, every five years.

Given the pace of change in the electric industry recently, DTE has been updating our IRP every three years. The Integrated Resource Plan details how we will meet customer electricity needs over the next 5-10 and 15 years and provides the road map for how we will produce the electricity that you use. We update this plan based on laws and regulations, forecasted customer energy needs, the cost of building and operating generation resources, technology availability and market dynamics. We also seek input and feedback from various stakeholders like yourself as we develop our plan. It takes us approximately 12 months or so to develop our plan.

And when filed, the proposed plan can be over 1000 pages in length, including multiple exhibits, and is informed by complex engineering and subject matter expertise. The proposed plan is reviewed by various stakeholders, including the Michigan Public Service Commission, the regulator that oversees energy companies like DTE in the state of Michigan. The IRP process is a formal, nearly yearlong review process before the commissioners may approve the final plan.

DTE filed its first IRP in accordance with the Michigan State law in 2019. In 2022, when we filed an updated plan called the Clean Vision Integrated Resource Plan, we worked with nearly two dozen organizations in our Clean Vision IRP or on our Clean Vision IRP and it was approved by our regulators in 2023. This is the plan we are currently implementing and you can see some of the highlights here on the slide.

You will notice that this plan is dramatically changing how DTE generates energy over the next 20 years.

At one time, 20 years ago, DTE Electric had one of the largest coal fleets in the Midwest, generating 77% of our energy from coal. Under this plan, DTE is increasing the use of solar and wind adding storage and planning for the retirement of the remaining coal units.

As I mentioned earlier, we are repurposing existing infrastructure at the Belle River Power Plant by converting its fuel source from coal to natural gas. This plant will run during periods of high customer demand, such as during extreme heat. In addition to generation changes, the plan also includes a target of 2% energy savings annually through 2027. This is achieved through customer energy efficiency programs. Our next IRP will be filed with the Commission next year in 2026.

These information sessions are one way we engage customers to seek input on our plan and we hope that you will join us in our next session on November 3rd where we will go into more detail on the IRP planning process and continue our conversation.

Now I will hand it over to my colleague Jamie, who will provide us more background on the electric distribution system.



Jamie Kryscynski 15:47

Thank you, Christina. Appreciate, appreciate everything you just gave us in the IRP. I learned something myself. Let me talk to you a little bit about the distribution system. So similar to the IRP that's coming, we also have a big filing coming up that we want to talk to you about. So we'll start by just talking about the distribution system. The video covered it quite well so I'll just like go over this in kind of a high level. We have generation sources which Christina just talked to you about. Electricity comes through the transmission grid which is kind of in the middle left hand side in kind of that blue circle there. And so it comes long distances across the transmission grid and then stops at our sub-transmission system. And so when you look at the two ovals in red there, the sub-transmission system and the distribution system, this is what we commonly refer to in DTE as our grid or the electric grid. And so we have the subtransmission system which is voltages of 24,000 volts and 40,000 volts and that moves electricity long distances but not quite as long as the transmission system. So it stops at a station, gets transformed into a subtransmission transmission voltage, and then those sub-transmission lines take it out to substations. And those

substations really are the start of the distribution system, where we take that power, again, convert it down to a lower voltage, put it onto the distribution lines, and then deliver it to homes, businesses, and anyone else who needs electricity.

Next slide please.

So what you can see here is that our grid is vast, right? It covers all of Southeast Michigan all the way up through the Thumb. We have over 2.3 million electric customers as part of it and we have over 46,454.6 thousand miles of line. Of those miles of circuits, the about 2/3 of them are overhead lines, most of them distribution voltage and then the 20% you can see on the screen 28,500 at the distribution voltage 2500 are at the sub transmission. And then the other third of our system is underground, again mostly distribution, but we also do have some sub transmission underground lines as well. As part of our grid we have 780 substations. Over 1,000,000 poles, just a massive amount of poles out there that we have to look at, inspect and maintain on a regular basis. And then we also have almost half a million pole and pad mount transformers out there. Those are the small transformers that either hang on the poles or sit on a pad for the underground system that are right by your home, homes, businesses and whatnot, where we actually take the power and do the final transformation for the voltage you can use within your homes, within your businesses.

Next slide please.

So one of the reasons we're here today is to talk about the Distribution System Plan. So just like the IRP is kind of the road map for the generation system, the Distribution System Plan or DSP is the road map that we use to lay out what our plans are for the grid. It's a detailed five year look at the different projects and programs we're thinking about and then we have an extended 5 to 15 year look into what does the future look like going out farther. So we have to file this plan every three years, the next due date for our company is June 30th, so end of June. So we will be we plan on filing on or before that date. As part of that process we are looking for and need to take feedback in from interested parties, so customers of all kinds stakeholders, people interested in this process. So we actually have a another one of these meetings coming up on the 20th of October so in in 20 short days where we're going to be going into more depth into the DSP and what are some of our initial thinking is on the DSP that we're going to be putting forth in eight months. And we'd like to get some feedback both at that time and then post meeting from people on our initial DSP plan and also it's not just what our plan is,

but what people would like to see in that plan. It's not it's in process it's not finalized so we're we're definitely have lots of time for input. Next slide please.

So this is my favorite slide of all of them. This is where I get to talk about what we have been doing. So we filed our last DSP in 2023 and we really laid out a four point plan. And so we will have all of these four points in the next DSP and probably more, more stuff as well, but these are things we've been working on and we think we've had a lot of success with them. The 1st is transitioning to a smarter grid. So you can see in the picture there that's a device called a recloser. And really what this is, is a piece of like smart grid technology. And so just like everything's you know been transitioned to computers and iPhones and all the other new technology over the last number of years we're doing the same thing on the electric grid. And so this device is really cool because it does two things. One, it allows us to see where the fault or where the damage occurred on our lines if there is an outage or if there is a problem and we can dispatch our crews directly to the location as opposed to in the past we'd have to patrol the entire line. So it really lets us get to the outage a lot faster. The other thing it lets us do is when you have multiple of these on a circuit, you can reconfigure the circuit in real time from downtown in our distribution system operations center, we call it the SOC. We can reconfigure it in real time so that we can isolate the outage to a much smaller area and have much fewer, far fewer customers impacted by that outage.

So we've been making a lot of progress here, transitioning to smart grid. There's a long way to go still, but we're excited and we're starting to see some benefits there. We are upgrading existing infrastructure. So this is kind of what I call the basic blocking and tackling of running a electric grid. It's going out and checking the poles and making and there's we actually drill the poll to test if it's still strong enough to serve, you know to serve additional years and if not we replace it. If it's a broken cross arm, we replace it. So it's kind of just the basic blocking tackling of replacing our infrastructure on a regular cycle.

#3 there, we're building significant portions of the grid. This is areas where we have maybe a particularly old portion of the grid. Oftentimes this is really driven by capacity or loading where we've had a lot of new customers come into the area or maybe one big industrial customer that's driven a lot of load in an area where we need to add capacity. And so a lot of times we'll need to add capacity as part of that we will rebuild a whole section of the grid and this can be both on the distribution and the sub transmission side of things.

And then last, by the end of this year, we will have trimmed out our entire system. We've trimmed over 40,000 miles of line since 2015 and we will be fully on a five-year cycle by the end of this year.

And this is brought tremendous reliability to our customers. We've seen a 40% improvement in tree related outages once we've trimmed through circuits. And so again, we'll be all the way through our cycle **by 2016. [EDITORS NOTE: This date is incorrect. Tree Trim cycle will be completed by 2026]** And it's it's been not been great. So all of these four things combined have been what we it's what we proposed in our last grid plan is our long-term investments that take take years to like put into practice we're seeing the results already in terms of improved reliability. Just a couple years ago we had a particularly bad reliability year. Already we've seen a 70% improvement from that year. So very, very excited. We feel like we're making some good progress here still still a ways to go. So with that I will, I think Ryan, I will turn it back over to you.



Ryan R Lowry 24:52

Excellent. Thank you, Jamie, and thank you, Christina. In any planning process, it's important to hear from our customers and other community stakeholders to learn what is most important to you. We'll be taking your questions, but you also have the opportunity to send us your comments or questions by following the QR code that is up on the screen right now you can.

Also send us an e-mail and you can visit dtecleanenergy.com to learn more about today's discussion. So again, we will start taking questions from the audience and to get things going. I'll go ahead and share some starter questions just to get the discussion going.

And Christina, I'll start with you with what is DTE doing to generate cleaner energy from sources like renewables? And there was a recent Michigan Clean Energy law in 2023. Is DTE on track to meet those targets?



Christina J Hajj 25:47

Yeah. Thanks, Ryan. So as I had mentioned earlier, we have a I think it was the 20 wind farm, 20 wind parks and about 34 solar arrays here in Michigan and we plan to continue expanding those projects and we are in the process. So our plan, the Integrated Resource Plan that we filed in 2022 continues us on that path. We plan to add 15 that over 15,000 more megawatts of renewables through 2042. We are well

on our way. We've got projects in process now you can read more on our on our website about progress as we keep moving. In terms of the clean energy law so there's several components within that law that changed in 2023.

One of those components is the Renewable Portfolio Standard. We recently filed our plan with the Michigan Public Service Commission that details how we are going to achieve the targets set forth within the Renewable Portfolio Standard 50% by 20 or in 2030 and then 60% in [20]35 and so we are on our way with that. Other provisions including the clean energy standard, statewide storage target and a whole host of other provisions that were updated will be addressed in our next IRP. Some more to come on that and please stay tuned.



Ryan R Lowry 27:26

Great. Thank you, Christina. And then Jamie, in the next five years, which investments will improve reliability performance the most?



Jamie Kryscynski 27:35

That's a great question. So we have obviously some longer-term investments, kind of the rebuilding the grid part of the three-point plan that I was talking about. But the things that will be kind of our quick wins is finishing up our tree trim. So we've seen a big reliability boost for that we're going to finish the cycle as I talked about. So that's going to be #1 is finishing the tree trim and keeping it on cycle will really help the short-term reliability. The next thing is our PTMM program. So this is a **pull pole** top maintenance and modernization program. We are making a much more significant investment in that over the next five years and so that will again be going out and testing our poles, looking at our looking at the cross arms, the wires, insulators, looking for cracked or defective pieces of equipment that are going to cause problems perhaps in the next storm or or a future storm. So we're looking for those things that will we expect that to make a huge difference in improvement in reliability. And the last thing I talked about is that automation. Being able to quickly restore customers from down here in Detroit in the SOC is going to be huge and being able to dispatch crews directly to the problem is going to really save us a lot of time. So those three things I think are the quick wins as we kind of do some of the more systematic larger scale changes over time.



Ryan R Lowry 29:03

Great. Thank you. We'll hold for a minute just to see if there's any additional questions that do come through.

Well, we don't see any questions coming through, but again, we provided information on how you can send us an e-mail. And of course you can visit dtecleanenergy.com to send us any questions or connect with our team if you do have questions. So today we learned about the energy system, generation and distribution system and the planning that goes into preparing the energy system for the future. Please join us on October 20th at 5:30 PM, where we'll be taking a deeper dive into the distribution system planning process.



Jamie Kryscynski 30:11

Hey, hey, Ryan, just sorry, this is Jamie. I think there might be a question in the chat.



Ryan R Lowry 30:13

Mhm.



Christina J Hajj 30:20

Yes, there is.



Ryan R Lowry 30:23

Oh, great.



Christina J Hajj 30:23

Yeah.



Ryan R Lowry 30:25

We'll go hold and give it a second. Thank you, Jamie.



Christina J Hajj 30:30

So I think, yeah, this one's for me, I believe.



Ryan R Lowry 30:38

Oh great, Yep. How does home solar or rooftop solar affect the IRP process?



Christina J Hajj 30:45

Uh, so.

Let me see.

So when we home solar, so you mean rooftop solar. So when we look at the Integrated Resource Plan, we're looking at a system wide need for energy based on customer demand.



Christina J Hajj 31:08

And so what we do is we have inputs in the model like you know, various performance characteristics and cost. And then the model looks across the 20 years and selects an optimal set of resources and we tension that and go, you know toggle up and down on various assumptions like costs and you know, forecasts of different energy demand, things of that nature. When it comes to rooftop solar, distributed solar, anything I mean we're looking across the whole system. We do take into account the cost of let's say you know larger utility scale if you will versus the smaller distribution located assets and those are all factors that are reviewed in the model. As far as which resources end up getting selected, we end up with a proposed course of action after we go through nearly 100 different model runs and the synthesis of results and in our proposed course of action, we call for a number of renewables over a long period of time or other resources. And once that plan is approved, we then move into our request for proposals to start the implementation process. And so we have you know all source RFP is one out right now. Assets that are on the distribution grid can also bid in should they meet the criteria of that RFP. We also are modeling distributed resources or distributed generation as a resource as well. So more to come on that and we can always highlight that a bit more in in our next session.



Ryan R Lowry 33:06

That's great. And I think you touched on that additional question that came through in terms of third-party ownership of large solar, so. [EDITOR'S NOTE: Question submitted into Q & A: *Do the planned renewable energy resource additions include solely utility-owned resources? How does DTE consider third-party owned, distributed generation in its integrated planning process?*]



Christina J Hajj 33:15

Yeah, I will say on that one piece on the modeling side, we're the model is agnostic

to ownership. We don't distinguish between utility owned and 3rd party owned when we're modeling and determining system need.



Ryan R Lowry 33:33

Excellent. Thank you, Christina.



Christina J Hajj 33:34

Yes.



Ryan R Lowry 33:37

And we'll just give it a minute to see if there's any additional questions that come through.

OK, maybe if the team can just give me a up or down. I don't know if there's anything else coming through. See nothing in review, so.

OK. Well, again, thank you everyone for joining us tonight. Our next sessions are going to be October 20th at 5:30 PM and then again November 3rd, also at 5:30 PM. We'll be talking about the Distribution System Planning on the 20th and then we'll be talking about Integrated Resource Planning on November 3rd.

We hope you'll all join us for these upcoming sessions, but if you're unable to join again, all of our recordings will be made available at dtecleanenergy.com for you to see. Thank you again, Christina and Jamie, and thank you again for everyone who joined us tonight.

● stopped transcription