Powering Michigan Session 3: Planning Our Future Energy Mix

November 3, 2025, 10:30PM

Ryan R Lowry 0:23

All right. Hello and thank you for joining us this evening. My name is Ryan and I support our customer communications at DTE and I'll be your moderator for today's discussion. And I want to start by thanking you for joining us for this third and final session in our Powering Michigan series.

Today's session Planning for our Future Energy Mix will provide you with a more detailed description of the Integrated Resource Plan, which is a road map for how we will generate the cleaner energy to meet your current and future needs safely, reliably and affordably.

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-hand side of your screen. Guests will be muted upon entering the meeting. However, questions can be submitted anytime during today's event.

If you're joining us using the Teams application, you can post your questions in the Q&A function on the top right side of your screen. And if you're joining us through the web browser version of Teams or by phone, please e-mail your questions to DTE underscore electric underscore cleanvision, that's all one word, at dteenergy.com. Again, that is DTE underscore electric underscore cleanvision at dteenergy.com.

We encourage you to submit your questions as soon as you have them, and we will address audience questions 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.

This meeting is being recorded and transcribed. Copies of today's presentation, recording and transcription will be available through dtecleanenergy.com and a screenshot of the site is on the screen right now. Please look for sections circled the sections circled in red to find these materials.

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All right, so let's start with a quick review of today's agenda. As we introduced in our previous sessions, there's a lot of planning that goes into making sure the energy system works safely, reliably, and affordably for everyone. To meet your future

energy needs, we begin planning today. For generation planning, we use the planning tool called the Integrated Resource Plan or IRP. Today we'll provide an overview of DTE's current generation fleet, we'll explain the purpose of an IRP, we'll review DTE's current Clean Vision IRP, and we'll discuss what we'll go into development of our next 2026 IRP. We will take questions following the presentation, but please feel free to enter questions at any time with the Q&A button or by e-mailing us again at DTE underscore electric underscore cleanvision.
At dteenergy.com. Now I'd like to welcome Christina to the program, who's a member of our Integrated Resource Planning team.

Christina J Hajj 3:24

Thank you, Ryan. First, I want to provide a quick review of DTE's generation system. 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 the different DTE resources on this page. DTE operates 34 solar and 20 wind facilities across the state of Michigan. We co-own the Ludington Pumped Storage Facility with Consumers Energy.
We launched the operations of our first utility scale battery, the Slocum Battery Energy Storage System earlier this year. We also have a natural gas plants including Blue Water Energy Center and we are in the process of converting the Belle River power plant from coal to natural gas.
In addition to our natural gas plants, the Fermi II nuclear plant provides 24/7 energy and once the Belle River plant is converted to natural gas, Monroe Power Plant will be the last coal plant in our fleet and is on track to retire in 2032.
If you are a DTE Electric customer, the energy you are using right now is being generated from a mix of these resources. This generation mix represents a balanced and diverse energy supply. This is important because it allows us to economically optimize with our energy fleet or optimize our energy fleet and support customer affordability. 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. We can then dispatch the storage from the Ludington facility when demand is higher during the day. With our dispatchable power plants like natural gas and nuclear, they are capable of producing energy 24/7 or 24 hours a day, seven days a week and can be powered up or down to meet customer demand.
As I explained in the first session, energy is a just in time service. This means that we

produce and deliver the energy you need at the time and moment you need it. This requires careful planning. The State of Michigan uses a planning tool called the Integrated Resource Plan or IRP for generation planning. The IRP details how we will meet customer electricity needs over the next 5,10 and 15 years and provides the road map for how we'll produce the electricity supply. We are required by state law to file the IRP with our regulator, the Michigan Public Service Commission every five years. Given the pace of change in the electric industry, DTE has been updating our IRP every three years or so. Our previous CleanVision IRP was filed in 2022 and our next one will be filed next year.

Before I provide an overview of our current 2022 IRP, I want to review the five objectives that guide our planning processes across both generation and distribution. Establishing our planning objectives is a key step in our process as it helps guide our thinking.

Briefly, these objectives are safe, reliable and resilient, affordable, customer accessibility and community focus, and clean. I'll start with Safe. Safety is a top priority for DTE for the IRP. This means building, operating and maintaining our fleet. Manner that ensures the safety of the public and our workforce in meeting all state and federal requirements.

Reliable and resilient. Having an electrical system 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 while ensuring we have timely two-way communication with customers and stakeholders in all communities. And finally, clean operating our systems in an environmentally sustainable manner, achieving carbon emission reduction goals and further enabling a decarbonized economy in Michigan.

Our current 2022 CleanVision Integrated Resource Plan is part of our commitment to providing reliable, affordable and cleaner energy. We worked with nearly two dozen organizations on our CleanVision 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 on the slide. What you will notice is that this plan is dramatically changing how DTE will generate energy over the next 20 years. At one time, DTE Electric had one of the largest coal fleets in the Midwest.

In 2005, just 20 years ago, 77% of our energy came from coal. Under this plan, DTE is increasing the use of solar and wind, adding battery storage and planning for the

retirement of our remaining coal plants in 2032.
As I mentioned earlier, there are we are also 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 summer heat. In addition to generation changes, the plan also includes a target of 2% energy savings annually through 2027. This is achieved through our customer energy efficiency programs.
As we begin developing our 2026 plan, we consider any new legal and regulatory requirements that affect our planning. After our last IRP, the State of Michigan passed a clean energy legislation in 2023.
The legislation sets out a series of targets and standards advancing the state's transition to cleaner energy. The legislation established a statewide energy storage goal, increased the renewable portfolio standard, and established a clean energy standard, and updated IRP filing requirements to include environmental justice and affordability analysis.
Our 2026 IRP will incorporate these new requirements and lay out a pathway to meet those standards. In addition to meeting legal and regulatory requirements, developing an IRP involves complex series of computer modeling and stakeholder engagement.
And now I'll turn things over to my colleague Shayla, who will describe our IRP modeling process.

Shayla D Manning 10:05
Thanks, Christina. Hello everybody. My name is Shayla and I lead the team working on the IRP modeling. IRP modeling is a fundamental to long term generation planning process. The modeling process is supported by a team of individuals and it's informed by complex computing and subject matter experts. This page shows a simplified view of the modeling process. We will begin. We will be going into more detail about these elements on the following slides, but here in general, modeling helps us solve the equation at the top of the page. These are also the key inputs into the modeling.
So looking at the top box from left to right, these inputs are: How much energy will customers need in the future? What are existing resources and what new alternative resources do we need to add to meet customers' needs?
Using these inputs, we run different scenarios. A scenario is a broad set of

assumptions or parameters that define what the future will look like. For example, will there be a major shift in the natural gas and coal commodity prices?
After the scenarios are run, the team also runs sensitivities on the scenarios. A sensitivity changes just one or a small number of elements in a scenario. One example is electrification. How many customers will own electric vehicles?
What year would they buy them and what time of the day would they charge them?
And moving down the page to the outputs, the output of the modeling provides an optimal or least cost build plan for all scenarios and sensitivity combinations which are then compared to each other in terms of cost, reliability and environmental impact.
So next I'll go into a bit more detail on the model. So as I mentioned, modeling helps us solve the equation in the top gray box, looking 5, 10, and 15 years into the future, what will our customers energy needs be? And based on what we have today, our existing resources, what new alternatives will we need to add in order to meet those customers' needs. So let's start with the far-left side of the page at our customers' energy needs. So another way to refer to our customer needs is also called an energy sales forecast. So an energy sales forecast is a prediction of how much and when customers will use electricity in the future. First, we consider current available information. Looking at past customer usage, this includes residential, business and industrial customers, we take a deeper dive into how each of these customer types uses energy differently. We also look for patterns in their usage, like whether people are using more electric vehicles or other technologies that may affect energy usage. And building on this current information, we look to the future where we can make educated predictions about how our population will grow, weather changes and also economic changes. Using a complex tool, we combine this information to estimate how much electricity will be needed each year and even consider at what times of the year and times of the day it would be needed most. This modeling is detailed and gets down to considering energy usage at every hour of the day, like hot summer afternoons or cold winter mornings.
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So once we understand our customers future energy needs, we review what energy generation resources we have today. As Christina mentioned earlier, DTE makes and stores power in a diverse way. We call these various forms of energy production resources. Making power from a diverse set of resources is important because each method offers different benefits and constraints. For example, solar power has no

fuel costs associated with it, but it can be challenging to site and permit.
Nuclear power is an environmentally friendly resource, but it's expensive to build. The diversity of the mix helps us manage energy generation, reliability and affordability, while also helping us achieve our goals to reduce carbon emissions from energy generation.
Another important component we consider is our demand side management programs. Demand side management means helping people and businesses use energy more efficiently or at different times of the day. We have many programs that help our customers reduce or shift their energy usage.
In addition to helping our customers be more sustainable and reduce their bills, these programs can potentially help us avoid building new power plants. Next slide.
So let's go and look at the last column on the right, new alternatives. As we mentioned before, our 2022 Clean Vision Integrated Resource Plan includes the retirement of our last coal plant by 2032. The 2026 Integrated Resource Plan will provide a more detailed plan for how we replace the power generated by that retired coal plant. As we plan how to meet our customers' needs in the future, we will consider adding alternative generation resources which can include emerging technology. Alternatives may be resources that are commercially available today, like solar and wind, or emerging tech emerging resources that may not be fully ready for deployment today, but may be in 5, 10, or 15 years, things like small modular reactors, hydrogen or long duration energy storage. We also consider opportunities to expand demand side management programs where we reduce or shift energy usage to off peak times. Taking all this information together, we model multiple scenarios and sensitivities to meet customer needs. For our 2022 Clean Vision IRP, we completed more than 100 modeling runs, allowing us to consider different ways to meet our customers' needs.
Another step in developing our IRP is engaging with various stakeholders. We have extensive engagement with our technical stakeholders and these are stakeholders who have expertise in various aspects of generation planning and may have different points of view than DTE.
As part of the IRP process, we invite technical stakeholders to provide feedback on our modeling. We do this through a series of workshops held over several months.
And we also get customer feedback on our approach. Over the past several months, we've been meeting with customers at community events to get their input. We're asking customers to share their feedback on DTE's overall priorities as well as specific

plans for transitioning to clean cleaner energy. We also collect feedback from customers through our website, e-mail, upcoming public meetings, and today's Q&A. You can find all these opportunities on our website, dtecleanenergy.com.
In over 12 months of modeling and stakeholder engagement, we develop and file an integrated resource plan with the Michigan Public Service Commission, which is the regulatory body that oversees energy companies within the state of Michigan.
When filed, that proposed plan can be over 1000 pages in length, including multiple exhibits, and is informed by a complex engineering and subject matter expertise.
Once filed, the proposed plan is reviewed by various stakeholders in the Michigan Public Service Commission in a formal, nearly year-long process before the Commissioners may approve the final plan.
And now I will turn it back to Ryan for the Q&A portion of our discussion.

Ryan R Lowry 18:54

Awesome. Thank you so much, Christina and Shayla. I know that was a lot of great information on our generation planning, so we'll give everyone about two minutes to submit any questions in the Q&A or by e-mail at DTE underscore electric underscore cleanvision at dteenergycom. So we'll go ahead and start the QA at about 5:51 M.
All right. It is 552 and we don't see any questions submitted yet. But to go ahead and get things going, I'd like to start with a question that's recently been in the news. Last week, DTE announced that it signed its first data center contract with a hyperscaler for 14 gigawatts of load. Now that is a significant amount of load to plan for. So Shayla, how will this be considered in the IRP planning process?

Shayla D Manning 22:10

Yes, thank you. That's a great question. So since we are in the very beginning of our planning phase or modeling phase, we will be able to include that 1.4 gigawatts of signed load into our base load forecast. And that is developed by our corporate energy forecasting team. So they will include the timing of that ramp into that forecast, which is one of our key inputs that we use in our capacity expansion modeling, which then identifies the set of resources that are needed to meet that customer demand and the timing of that demand.

Ryan R Lowry 22:52

Great. Thank you so much.

Shayla D Manning 22:54

Yep.

Ryan R Lowry 22:57

And then, Christina, you also spoke about the Belle River Power plant converting from coal to natural gas and DTEs last coal-fired plant in Monroe retiring in 2032. How is DTE thinking about employees impacted by this transition?

Christina J Hajj 23:10

Question. We're committed to working with our employees through this transition and ensuring employees, both union and non-union have the opportunity to contribute to our plan and our long term success through collaboration with union leadership. DTE is developing an employee transition strategy that includes reskilling, retraining and redeploying to other roles in parts of our company.

Ryan R Lowry 23:38

Awesome. Thank you so much. And I see we do have two published questions in the chat. I know Shayla had spoken a little bit about data centers. I don't know if there's anything else you want to add based on these two questions, Shayla.

Shayla D Manning 23:56

Uh, sure. So as I mentioned in our base forecast, we will be including any data centers that we have a signed contract for. But aside from that, we know that data centers provide a lot of risk and uncertainty in our future. So we will be addressing various levels and timing of potential data center demand into the IRP through sensitivity analysis.

Ryan R Lowry 24:25

Great. Thank you.

Christina J Hajj 24:28

And to just add a bit to when we look at these, just to reiterate what Shayla said, these are complex models that look at, you know, every hour of every year for many years into the future. So a lot of a lot goes into this planning and to supporting any

customer, whether that's a residential customer, a small commercial customer, a large customer. And so we include all of that in the ways that customers use energy into the long term planning to make sure that we have enough resources around the clock to serve all of our customers.

Ryan R Lowry 25:10

Great. Thank you both.

We'll go ahead and give it another minute, see if we get any additional questions.

OK. Well, I think we can go to the next slide.

Perfect. Well, thank you everyone for joining us for this third and final Powering Michigan session. Today you are introduced to DTE's generation resources, the purpose of IRPs, our current Clean Vision IRP and how we're developing our next 2026 Clean Vision IRP.

We hope these sessions have helped you understand how DTE plans for the future of our energy system here in Michigan. This session, as well as the previous sessions, were recorded and we'll make these available through our website at dteecleanenergy.com. Thank you all again and have a wonderful night.

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