Today on across the fence changes like this new digital meter that you're seeing is are coming to Vermont Homes and businesses. It's part of smart grid. We will learn what the upgrades and technology mean for you. Good afternoon and thanks for choosing across the fence I'm Will Mikell in from Judy Simpson. Smart grid technology updates are now being installed by Electric Utilities throughout Vermont. While many of us have heard about smart grid count me among those who don't necessarily know exactly what that means or what we can expect. This afternoon we're going to take a look at Vermont’s electric grid and we're going to learn why Vermont Utilities are giving it a bit of a makeover. With more on that I'm joined by Vermont’s two largest utilities Robert Dostis with green mountain power and Amanda Beraldi is with us from Central Vermont public service. Good afternoon and I really appreciate you being here. I'm going to be the first to confess that I don't know a lot about smart grid and I'm looking forward to learning more about that. Before we get into that what is it?

Robert.: At a very high level what it is is about having more information both utilities having more information and customers having more information in order to from the utility perspective be able to provide customers with better service or reliable power more cost efficient way. For customers having more information so they can make choices about how they use electricity to reduce their own costs and also to reduce the amounts of carbon would put into the atmosphere.

Will.: Its reliability benefits are some of the things I'm hearing you touch on.

Robert.: Exactly.

Will.: We're going to get into more of those as the program goes along but I also think it would be helpful to get an overview of the grid. We hear about it again what's that mean what is the electrical grid and how does it work?

Amanda.: The grid refers to the huge connected system that brings electricity to the continent. It really starts with generating electricity and that could be either nuclear coal hydro solar wind and other fuel. Once the electricity is generated it is put through the lines distribution lines transmission lines to individual homes and businesses.
Will.: Which is reflected here in the image there we're seeing. It leaves the plant it goes along with the arrows to the left to businesses and then we have homes over there on the right. Which is saying is it doesn't really matter what the sources we have a variety of those here in Vermont and throughout the country. So that's the great in a nutshell?

Amanda.: In a nutshell. For much of the United States we've been depending on the grid for more than 100 years and now there are some challenges.

Will.: You've loaded the deck there what are those challenges?

Robert.: First and foremost in mount of electricity that we're demanding as a society. Since the 1960s as the chart shows the average household has tripled the amount of energy that uses the amount of electricity that it uses. That is having significant impacts on the grid itself. That it shouldn't be surprising to think about all the gadgets that we have in our homes and things we depend on for using electricity. There's significant demand and that demand is having an impact on our ability to deliver services to customers Nationwide. One of the stresses of this is the sheer number of blackouts that we as a nation are having and what that means in terms of the annual cost which airs the slide shows over $150,000,000,000 a year. Clearly our existing grid needs an upgrade in order to address the increase in demand.

Will.: I guess it does make sense. Computers all kinds of things like that and I guess I'll be honest I'm stunned three times more electricity than a year that I was born.

Robert.: Yes if you think about electricity we have in our homes these days we depend on electricity for many of the things that we use every single day. If you add to that the future which is going to be more electrification of our transportation system you're going to see there's going to be more demand for Electric Services. So the grid needs to catch up to that demand and that's what we're doing with smart grade technology

Will.: Has the production of electricity or the amount of electricity kept up with demand? Is and that one of the things that can cause brownouts or blackouts or do I have the wrong?

Robert.: There's a full generation out there so we are keeping up with demand by having more generation.

Will.: The other piece that has changed though is the idea we are not only using more but with the high Tech Equipment that has to be enormously reliable. Channel three is a great example if things come down here the news does it go on the air nothing happens the electricity.

Robert.: In today's society businesses depend on their computers they need reliable electricity. In the past if there were surges or dips in electricity usage most of us wouldn't even have noticed that's different now. In homes when there are surges are dips our clocks may go off kilter and you have to go home and reset them. It's annoying but for businesses when that happens it can mean significant dollars for them in terms of lost productivity and lost product. They've really rely on quality electricity delivered at the same voltage moment to moment.
Will.: That's where we saw the information earlier 150 billion dollars a year in cost. So that's one of the pieces the reliability. How will the smart grid updates change some of these issues that we're talking about? Once we're getting in on a system beginning to make these changes?

Robert.: There will be as part of the infrastructure new sensors that are put on to the electric grid throughout the entire grid. The sensors will tell utilities we were problems exist. Knowing where they exist we can actually get to them quickly. We will know preventively where there are weaknesses in the system and we can do investments in those particular areas to avoid problems that we currently are experiencing.

Will.: An analogies that its way off kilter but maybe like a railroad track where there someplace that needs boosting that the whole line doesn't need to be upgraded you can target something very specifically.

Robert.: Exactly.

Will.: Changes that consumers will see? We showed one piece here in the beginning what will we see as consumers?

Amanda.: Over the next year and a half most homes and businesses will get a new digital meter. This meter is one of them. It fits in the same spot as the current leaders fit.

Will.: And exactly like the one I have now from Green Mountain power that would either be attached to the house or out in front somewhere. So physically difference is not a big deal. I'm guessing that it's the inside that makes the difference.

Amanda.: And some of the capabilities that has. This will send your information back usage information back to the utility so there will no longer be a meter reader visiting your home. It also is able to let us know when there's a power outage. Even before you wake up or come home we will know that there's a problem and have crews out there working on fixing the problem.

Will.: So again we talked about cost savings and I'm not trying to run anyone out of the job that there's already identified cost savings that somebody doesn't need to come to the house to read the meter.

Amanda.: That's correct.

Will.: There's another piece of technology not quite as important and we didn't want to emphasize it as much but I am going to hand this over to you Amanda. What is this piece?
Amanda.: This here is an in home display. This is a device that can show the consumer their usage and price of electricity at that point in time. This little device is something that we're testing. We want to know if it's cost effective and if customers are finding it useful. This is one of the ways that customers can benefit from the meter being at their home. It's collecting more information and the customer will have more information so that they can look for opportunities to perhaps reduce their usage there by reducing their electric bill.

Will.: If I had a straight you said before we got started that everyone will get a new meter is that correct?

Amanda.: That's correct.

Will.: Not everyone will get this piece here.

Amanda.: Right this is one way to get information. It is a in home device that we're testing customers can also go to a web portal and securely sign in and get their information that way. Vermont Electric cooperative has a web portal in place and I believe we have a video clip showing some of that functionality for customers.

Will.: We do so let's take a look.

This is a control center and this is where the two way communication begins. Before they were out there someone blind now are able to be their eyes from teen the control room instead of having them drive around looking for the problem.

I can see the 50 mile radius around me but our dispatcher center can. With smart meters the control center can find out if Mrs. Jones does are does not have power and then who else on the street may also be affected and trace it back to a source for us.

Will.: If you're just joining us we're discussing smart grid technology this afternoon with my guests Robert Dostis of green mountain power and Amanda Beraldi of sensual Vermont public service. We're talking over all about changes and am wondering if I can ask you to keep going in that vein? But other changes Julie experience as consumers or to the grid? I guess we're speaking specifically I'm no we have another clip we will get to that will show us some information where they will see their electricity. I apologize let's go to that clip now and come back to talk about that please.

With the new outage management system that's tied into the smart grid it gives us a much better idea of the length of outages and also allows two way communications for members so they can monitor their usage. It really allows people to figure out what they're using that causes their bills to go up. You can see that spike when you to a load of laundry or run your dishwasher or plug your vehicle in overnight. Then you can associate it with a cost to know whether it's the fact if or if it's something you can do about it.
Will.: This is all very exciting. I don’t think you have to be a technology policy wonk to be interested in this stuff. We’re seeing some pieces here in talking with their friends from the utilities. Again there’s a summary of benefits that you can walk as through?

Robert.: Let me talk about a real example. Right now when there’s an outage we will send a truck out and we will have a general idea of where the outage is. We will send that truck in those drivers need to look and go down the road trying to find exactly where that outage is and that takes time. If the new technology we will be able to pinpoint exactly where the outage is. Not only that we will be able to isolate that remotely so we can keep everybody else on and put other people on while we send a crew out just to deal with that particular problem. That is efficient that is more cost effective and that means better service for our customers and that’s the bottom line of what smart grid is all about. It’s about providing our customers with better service more reliable power and the most cost effective way possible. Customers now this is a new relationship where customers are going to have with utilities were going to be partnering with them and more will come about that partnership as time goes on that they’re going to have more information they’re going to be making decisions to help reduce the amount of electricity they use during critical times expensive times and making those decisions they’re going to help us reduce all of our carbon footprints. It’s a new exciting time for everyone involved utility and customers but customers are now going to engage in a whole new way that they haven’t in the past.

Will.: Just a few minutes left could ask you to open up the environmental peas a little bit more about how smart grid would be better and we’ll be better for the environment?

Amanda.: Absolutely. The two way Communications System that Robert mentioned earlier is going to allow us to have more information about how the grid is operating. We’re going to better incorporate this smaller regional malls the wind and solar that are more intermittent resources and now with the more information we're going to be able to more seriously integrate those types of renewable bulls onto the system. Also we will be able to work with customers to reduce demand during those very very critical peak days. The hot days in the summer is when we’re using dirty regeneration. If we’re able to cut that peak low were able to cut that generation.

Will.: We talked before we started the program that even today if we can do things energy uses at night it helps the grid. Smart grid is going to be able to help us see that even more?

Amanda.: That’s right. You're going to be able to know how we’re using electricity you're going to be able to see opportunities to reduce and save money. You’re going to see opportunities to shift spread it out and make it a more even usage over time which helps the grid and will help us be able to pass savings on to you.

Will.: So you guys you here from CV PS and GMP are all utilities in Vermont on board and if so where do I go to get more information?

Amanda.: Yes customers can call their electric utility he can talk to a customer service representatives. They can go to web sites like CV PS.com or green mountain power.com there are other utilities listed on the screen as well as other partners where they can call and find out more about the program and what it means for them specifically.
Will.: And the last piece in addition to doing that there will be some communication coming from utilities to customers around.

Amanda.: That is correct.

Will.: OK that is our program for today I want to thank you very much for joining us. We know the you have choices and we thank you for joining us I'm will Mikell inviting you to join as each weekday for another visit across the fence.

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