

INFRASTRUCTURE INNOVATION

Powering Customer Knowledge

If it was easier to make your home more energy efficient, would you do it? What if all you had to do was pose the question out loud in your own home to receive an immediate answer?

That's the goal of Indiana Michigan Power (I&M) with new voice technology that customers might use to ask – “what's my bill this month?” – report outages or even inquire about job openings at the Fort Wayne-based organization.

I&M Vice President of Finance and Customer Experience Dave Lucas points to voice as an “emerging channel” and notes that projections for the number of customers utilizing voice-controlled speakers (such as Amazon's Alexa or the Google Assistant) will be over 40 million units in 2019.

“The voice channel is still early in its development but is seeing significant growth in popularity with some customers that are early adopters. Our goal at I&M is to meet all of our customers where they want to be met and provide information that's useful to them,” Lucas explains.

Customers can also ask their digital assistants about renewable energy, a wide range of questions on billing and energy efficiency, and they may eventually be able to pay their energy bills through the voice-controlled devices.

The technology is being rolled out slowly to customers right now through structured user testing and feedback, Lucas offers.



Indiana Michigan Power customers will soon be able to access information via voice assistants.

“We're working on the voice channel daily. We have a dedicated team at AEP (American Electric Power) that the I&M team works with closely to make features like bill payment an option in the voice channel,” he notes.

“In the future, we'll be exploring functionality like linking the I&M voice channel to marketplaces that will allow customers to take immediate action on energy tips. The potential for this type of functionality in this channel is very exciting for customers.”

The information that I&M will provide to customers via voice is already available and can be found on the company's web site.

“It opens up another more interactive channel for a customer segment that is interested in engaging with their energy company in a different way than through traditional channels. I&M now has a new mobile app, social media team, updated web site and now voice. We think being engaged in all of these channels is essential for us to communicate with our customers and provide the experience they now expect from their energy company,” Lucas adds.

RESOURCE: Dave Lucas, Indiana Michigan Power, at www.indianamichiganpower.com

Broadband Provider Raises \$13 Million

An Indianapolis broadband provider has raised almost \$13 million in a recent funding round, expanding the company's capabilities to provide service to customers throughout Indiana – and outside the state's borders.

Intelligent Fiber Network was founded by 20 Indiana rural exchange companies in 2002 as Indiana Fiber Network. The name was changed last year.

CEO Jim Turner says the new funding round also brings on an additional partner: Wabash Valley Power Association (WVPA).

“We have a very capital-intensive business, which is not unusual at all depending on the part of the state where the build is taking place. So, we made a decision as a company in the last year or so that we were going to grow and try to grow our network, which means raising additional capital,” he explains.

He reveals the primary purpose of the funding is to expand the company's existing 4,500-mile-plus network of broadband fiber, including getting into areas that may not have fiber already in place.

“The second significant purpose will be deepening our presence in areas (where) we have fiber today, but (we) haven't really penetrated the customer marketplaces as deeply as we think we can to get us to additional customers.”

Rural cooperatives (through WVPA) put their assets into Intelligent Fiber Network because by combining resources they have more control from a pricing and service standpoint, Turner offers.



Intelligent Fiber Network is seeking to enter new territories.

Getting those rural areas connected via broadband is an acknowledged economic development challenge, but the company's member owners are taking up that mantle in some cases.

"People think about fiber in rural areas and worry whether we've done enough to close the digital divide. Most of our member owners, if not all of them, have either extended fiber to the home in their

particular service areas or have plans to have fiber in the home.

"Access to that high-speed network shouldn't depend on your zip code or where you live," Turner asserts.

He says the No. 1 issue of concern for customers at a rural electric co-op "isn't related to electricity. It's related to broadband."

RESOURCE: Jim Turner, Intelligent Fiber Network, at www.intelligentfiber.com

Notre Dame Goes Mach 6

Traveling from one U.S. coast to the other in a matter of minutes sounds like science fiction.

There is a lot of science involved in such a feat. And now at the University of Notre Dame, the research of hypersonic travel with a quiet Mach 6 wind tunnel deflates the "fiction" piece.

There are only three "quiet" wind tunnels in America, including one at Purdue University and another at Texas A&M. The new testing facility is the largest in the country, according to Notre Dame.

The project is an initial step in a partnership between Notre Dame and Purdue to develop more hypersonic tunnels. And the \$5.4 million cost was partially funded by the Air Force Office of Scientific Research, with support from the Office of Naval Research, The Boeing Company, Notre Dame's College of Engineering and Notre Dame Research.

Mach 6 refers to the multiplication of speed of sound, so the tunnel can move air six times the speed of sound.

Flying from Washington D.C. to Denver at Mach 6 could take 15 minutes, while flying from the nation's capital to Los Angeles could occur in the same amount of time at Mach 9 speed.

"This tunnel's combination of low noise and large size enables previously impossible experiments to be carried out," says Thomas Juliano in a Notre Dame press release. Juliano



Indiana is the home of advanced wind tunnel testing, with this facility at Notre Dame and another at Purdue.

is leading the experiments in the hypersonic wind tunnel project and is an associate professor at Notre Dame.

Even though the word "quiet" is in the name, the wind tunnel itself – weighing nearly five tons – is given the moniker because it is designed to "minimize acoustic disturbances present in conventional high Mach number wind tunnels."

The military interest includes getting

emergency aircraft to areas around the world in less than an hour. But there are challenges with getting to those speeds, due to heat and friction. To make the hypersonic travel possible and safe, researchers need to develop thermal protection systems. That's what they'll study at Notre Dame.

Next steps include building additional wind tunnels, up to Mach 10 speeds, at Notre Dame's facilities.

RESOURCE: University of Notre Dame at www.nd.edu