



DTE Energy®

MI GreenPower

REM 2017 Conference

Julie Londo – Renewable Energy Program Manager
October 22-24, 2017



DTE Energy is Michigan's largest investor in - and producer of - renewable energy



DTE's Renewable Energy Portfolio



91% Wind



3% Biomass

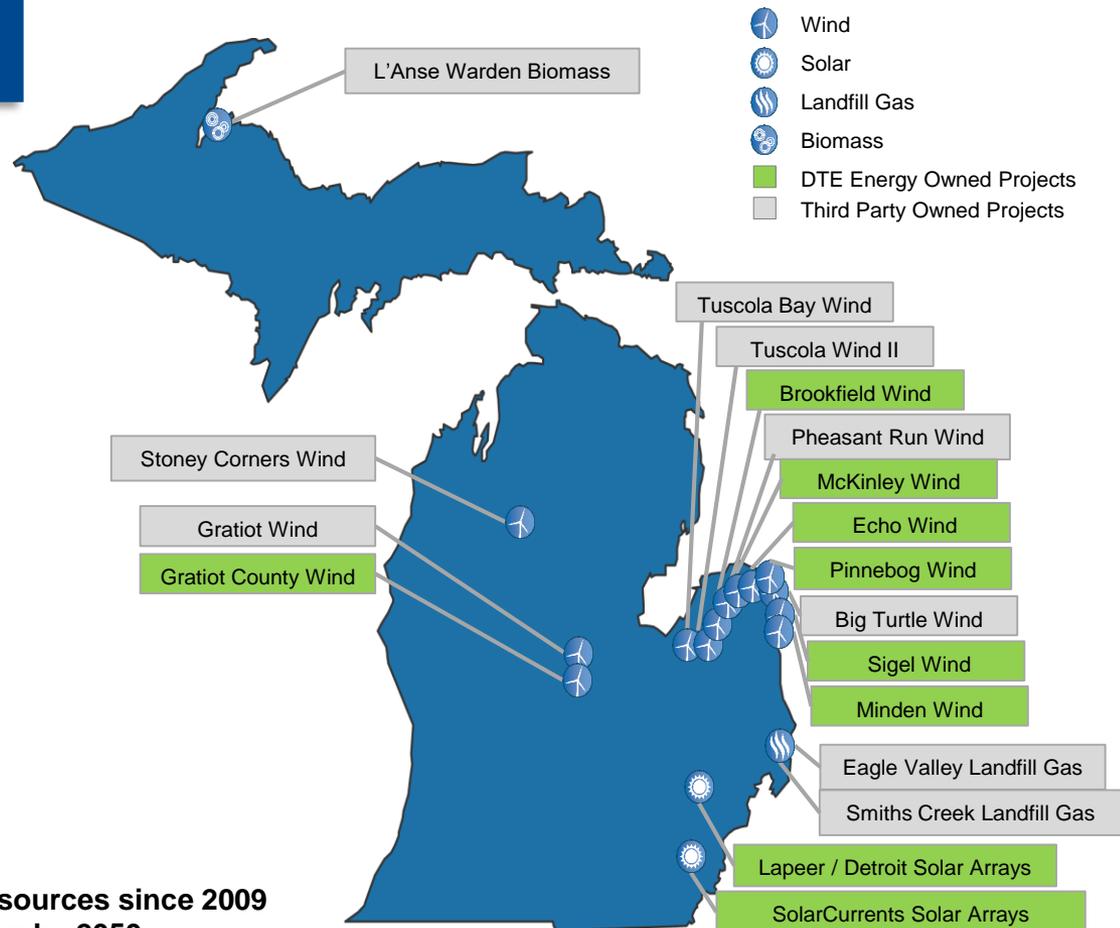


6% Solar



1% Landfill Gas

- Nearly 1000 MW of generating renewable resources since 2009
- 2017 announcement of 80% carbon reduction by 2050



Introducing DTE's new voluntary renewable energy program!

MI *GreenPower*[™]

**REDEFINE
HOW YOU
USE ENERGY**

Join MIGreenPower and reduce
your home's carbon footprint
with local wind and solar power.

MI GreenPower Solar Projects

Aerial View – Lapeer Project



- 200,000 solar panels
- 48 MW covering 270 acres
- Enough energy to power 11,000 homes

Rendering – Detroit O’Shea Park



- Wayne County
- 2 MW covering 10 vacant acres
- Enough energy to power 450 homes

Pinnebog Wind Park – Bad Axe



- 30 wind turbines
- 51 MW
- Enough energy to power 24,000 homes

Why MIGreenPower?

- Completion of previous customer-owned solar program in 2015 caused customers to request another solar option
- As solar pricing began to drop, DTE leadership began to consider the possibility of another offering for customers
- A team was assigned to analyze solar program trends and costs across the U.S. and design a program that would appeal to our customers
- A hybrid program of wind and solar resources was settled on to provide the best pricing for our customers

MIGreenPower Program Design

- MIGreenPower is a pilot program designed for any electric customer wishing to go beyond the 10% renewable energy that they already receive from DTE's generation fleet
- The program requires no on-site installation, no upfront investment, no operating and maintenance obligations, and no long-term commitment; \$50 early-out fee if customer leaves program before first year
- Program subscribers pay a fixed-cost subscription fee of \$0.072/kWh and receive a floating credit starting at \$0.041/kWh for energy & capacity. The credit is evaluated yearly and adjusted accordingly; credit expected to slowly increase over the 20 year life of the program
- Subscribing customers identify the total renewable energy percentage they want above the 10% already received through the current Renewable Portfolio Standard. MIGreenPower supplies the additional renewable energy above 10% and represents additional renewable energy being built, operated and maintained by DTE Energy above the mandated goals set by the State of Michigan
- MIGreenPower will be enrolling interested business and residential customers through year-end 2018 with the possibility of extending the program through 2019

- Held several residential and business focus groups over a two-year period to listen to what our customers wanted in a green power program; customer feedback helped the development team select the program name
- Green power program benchmarking made it clear DTE wanted 3rd party expertise to help market and acquire customer enrollments
- Filed a Request for Proposal in June 2016; vendor selection completed by October 2016
- Vendors worked with DTE Renewable Energy and Corporate Communications teams to develop website and marketing plan and materials for MIGreenPower April 3, 2017 Go-live; not intergrated with the SAP system being implemented at DTE at the same time
- Program appears automated but is 90% manually processed until automation is implemented; implementation expected Q2 2018

MI GreenPower Marketing Materials



MIGreenPower Marketing Tactics

- Community Outreach
 - Residential Door Knock campaigns have concluded for this year; beginning again in Spring 2018
 - MIGreenPower teams have been scheduled for dozens of outreach events such as:
 - Farmer's Markets (Plymouth, Royal Oak, Eastern Market)
 - Entrepreneur & Small Business Conference
 - Tigers games
 - Michigan Sustainability Conference
 - 2030 District USGBC Meetings
 - Battle of the Buildings – Award Ceremony
 - MIGP Employee Day @ DTE Headquarters
- Ongoing Campaigns
 - Bill Inserts and eBill Messaging
 - Program brochures to residential and commercial customers
 - Major Account Services business customer outreach
 - Digital Ads
 - Empowering MI Blog
 - Energy Smart for MI Businesses Magazine
- Retention and Green-e Mailings
 - Welcome Kits
 - Window Clings
 - Facility Tours
 - Program Newsletter



GREEN FAIR
OFFICE OF THE MAYOR OF ANN ARBOR

Customers can calculate how their monthly bill will change based on subscription rate



Environmental Impact Calculator

Choose the amount that reflects your average monthly usage. ?

0 kWh



404 kWh

Choose what percent of your bill that you would like to match with clean energy. ?

10%



50%

That's an estimated increase of **\$5.57** to your average monthly bill.

This generation has an environmental benefit equivalent to taking **0.32** cars off the road for one year or planting **39.24** trees!

Avoided emissions and equivalencies are based on Egrid 2015 non-baseload emissions factors by subregion and the Environmental Protection Agency equivalencies calculator at <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

The program appears as an addition to the customer's normal bill in the form of subscription cost and credits



Sample Industrial Bill Example

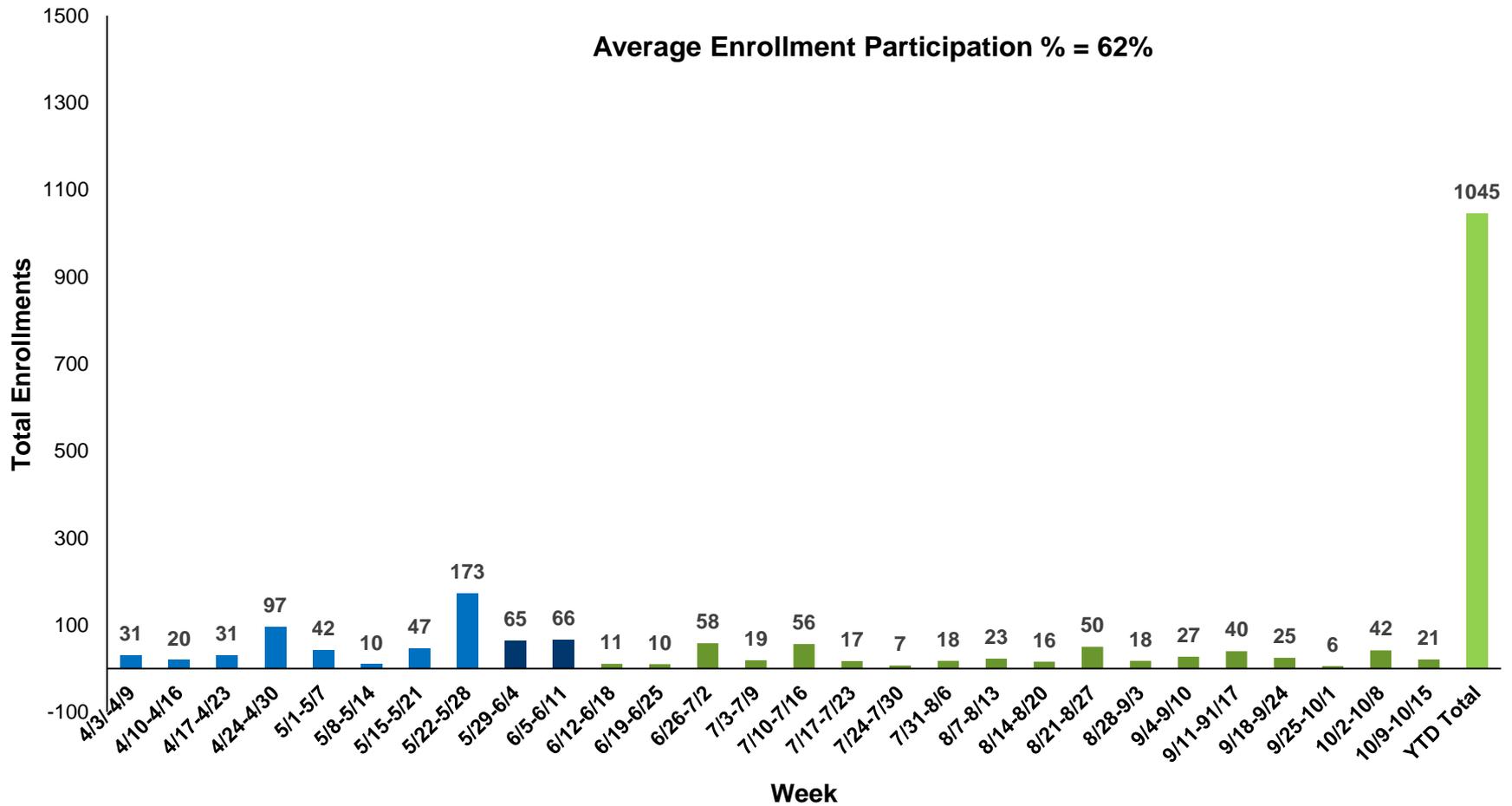
ILLUSTRATIVE

Charges for 08/03/2015 through 08/31/2015					
Power Supply Charges:					
Power Supply Demand	8,081	KW	@ \$ 10.48	(See 1 Above)	84,688.88
Power Supply Energy:					
Power Supply Energy	3,651,200	KWH	@ \$ 0.0398600	Per Total KWH	145,536.83
Off-Peak Discount	2,543,697	KWH	@ \$ -0.0030000		- 7,631.09
Surcharges:					
Power Supply Cost Recovery Factor	3,651,200	KWH	@ \$ 0.0025800	Per Total KWH	9,420.10
Renewable Energy Plan Surcharge	2.00	MTR	@ \$ 26.68		53.36
Sub Total:					232,068.08
Delivery Charges:					
Service Charge					275.00
Distribution:					
Distribution Demand - PV	9,361	KW	@ \$ 2.18	(See C Above)	20,406.98
Surcharges:					
Nuclear Decommissioning	3,651,200	KWH	@ \$ 0.0007780	Per Total KWH	2,840.63
Energy Optimization Surcharge	2.00	MTR	@ \$ 501.19		1,002.38
LIEAF Factor	2.00	MTR	@ \$ 0.9700000		1.94
U-17767 IS	3,651,200	KWH	@ \$ 0.0030720	Per Total KWH	11,216.49
Sub Total:					35,743.42
Invoice Subtotal					267,811.50
MI Green Power					
20% Subscription Level	1				
Subscription Cost	405,689	KWH	@ \$ 0.072	Per Total KWH	\$29,209.61
Subscription Credit for energy and capacity	405,689	KWH	@ \$ 0.04	Per Total KWH	\$16,227.56
					\$12,982.05
Invoice Total					\$280,793.55



- Participating customers choose the level of renewable energy they would like to receive from DTE beyond the existing level of 10%
- Program is a “pay-as-you-go” structure with a one-year minimum commitment
- Customers are billed at their normal tariff rates and the program costs will show up as an additional bill component in the form of a subscription fee and credits for each subscribed kWh
- Subscription **fee** is the LCOE of the renewable assets plus administrative fees and remain constant over the life of the program (7.2¢ / kWh)
- Subscription **credits** applied for energy and capacity and update annually
 - Energy credit = fuel and purchase power rate embedded in DTE tariffs (minus transmission costs)
 - Capacity credit = value determined by MPSC-led 2015 Solar Working Group x MISO capacity credit of renewable resource

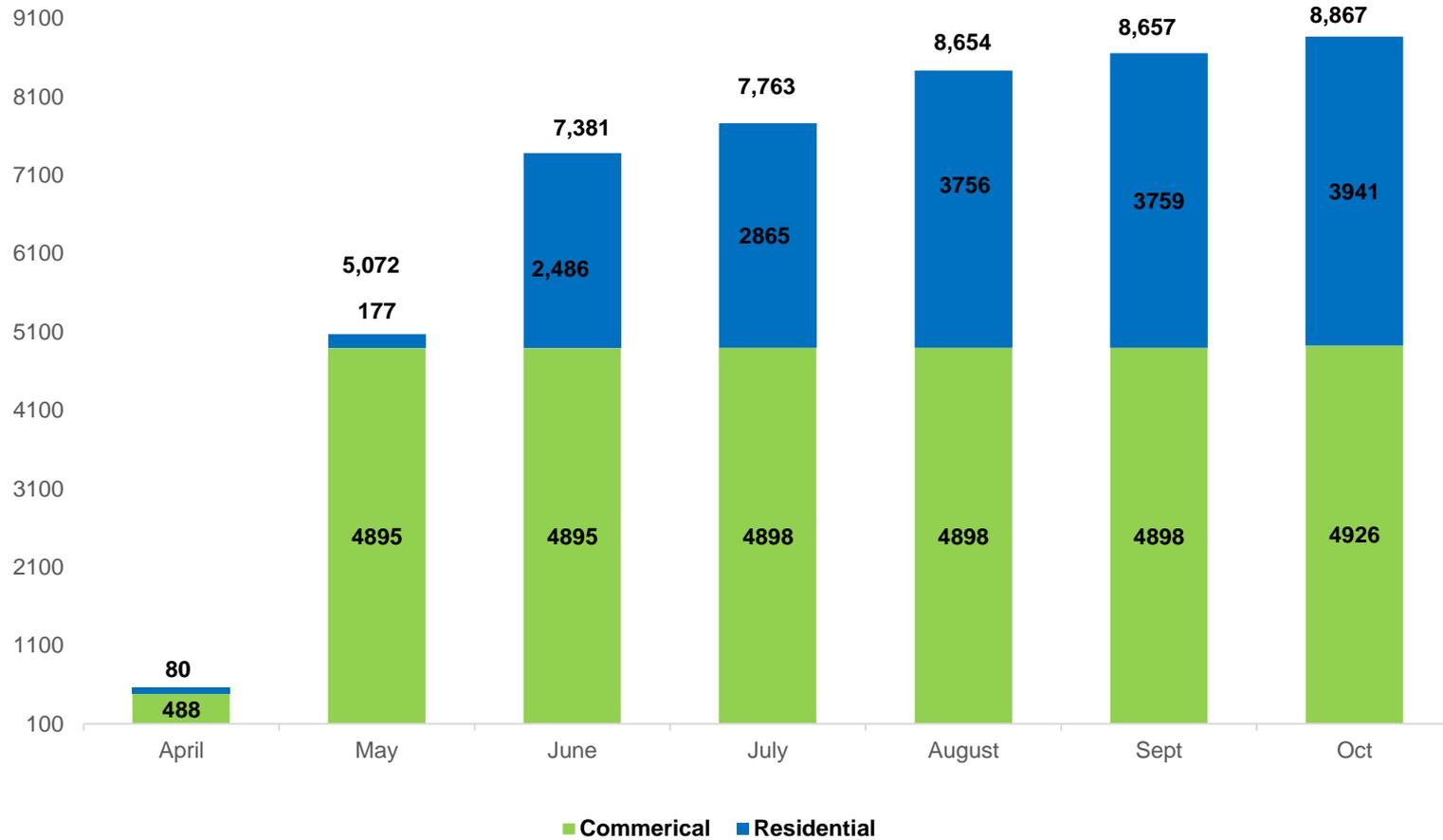
MI GreenPower Total Enrollments as of October 15, 2017



MIGreenPower MWh Enrollments Residential vs Commercial October 15, 2017



Total Enrolled MWh = 8,867



- Bringing in 3rd party experienced green power program vendors to assist in development and implementation of your green power program is essential

Learning – Our vendor experience made our implementation much less stressful because they knew what they were doing. We didn't waste internal resources or dollars because we got it right out of the gate with their guidance

- If possible, allow more time after vendor selection to design, develop and implement a new program

Learning – Implementation schedule after vendor selection was really tight. More time for accomplishing deliverables would have been welcome

- MIGreenPower was introduced at the same time DTE Energy moved to SAP replacing all existing customer-based systems

Learning -- manual intervention into a brand new customer billing system not yet live proved to be difficult for the MIGP implementation team and the IT support needed to make it happen

- MIGreenPower is being manually billed since go-live with automation of the processes currently underway and automation implementation expected by end of 1st quarter 2018

Learning -- many challenges with rolling out a new program and designing manual enrollment and billing processes then automation design all within the last nine months



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