Consumers Energy Non-Wires Solutions

May 13, 2020

Consumers Energy
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Agenda

Background

Pilot #1: Swartz Creek Substation

- Substation Summary
- Timeline and Approach
- Lessons Learned

- Field test of concepts
- Time limited

Pilot #2: 4 Mile Substation

- Substation Summary
- Timeline
- Selection Process
- Quick Launch Programs
- Deep Dive Analysis
- Approach

- Multi-year
- Designed for deferral

Working Group

Non-Wires Solutions (NWS) Pilots

- Pilot started in 2015 as collaboration between NRDC and Consumers Energy, before the concept of NWS gained momentum nationally
- Consumers Energy launched its first NWS pilot location at Swartz Creek in 2017
- In 2018 and beyond, NWS are being introduced into utility planning processes
- Pilots are focused on increased participation in existing Energy Waste Reduction (EWR) and Demand Response (DR) programs to determine if NWS are a viable lower cost option to infrastructure upgrades
- Pilots are currently funded and managed within the DR and EWR portfolios, but that may evolve over time

Pilot #1: Swartz Creek

Swartz Creek Overview

~4500 Residential Accounts

- 63% of total kWh
- ~6200 average kWh/year
- Lower than average income

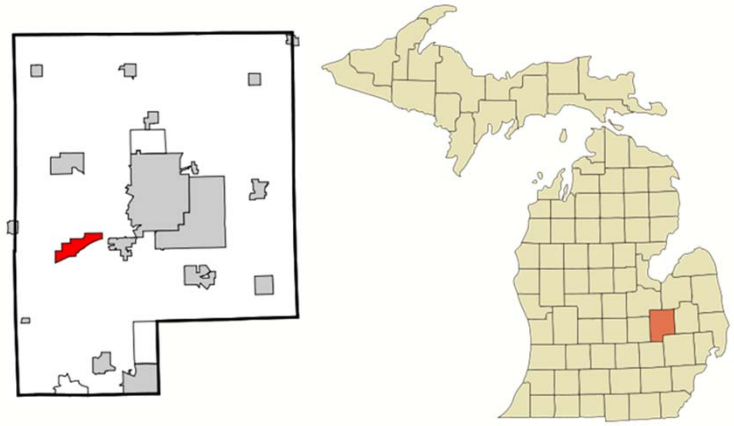
~300 C&I Accounts

- 37% of total kWh
- ~50,000 average kWh/year
- No industrial load
- 2 largest customers ~50% of kWh

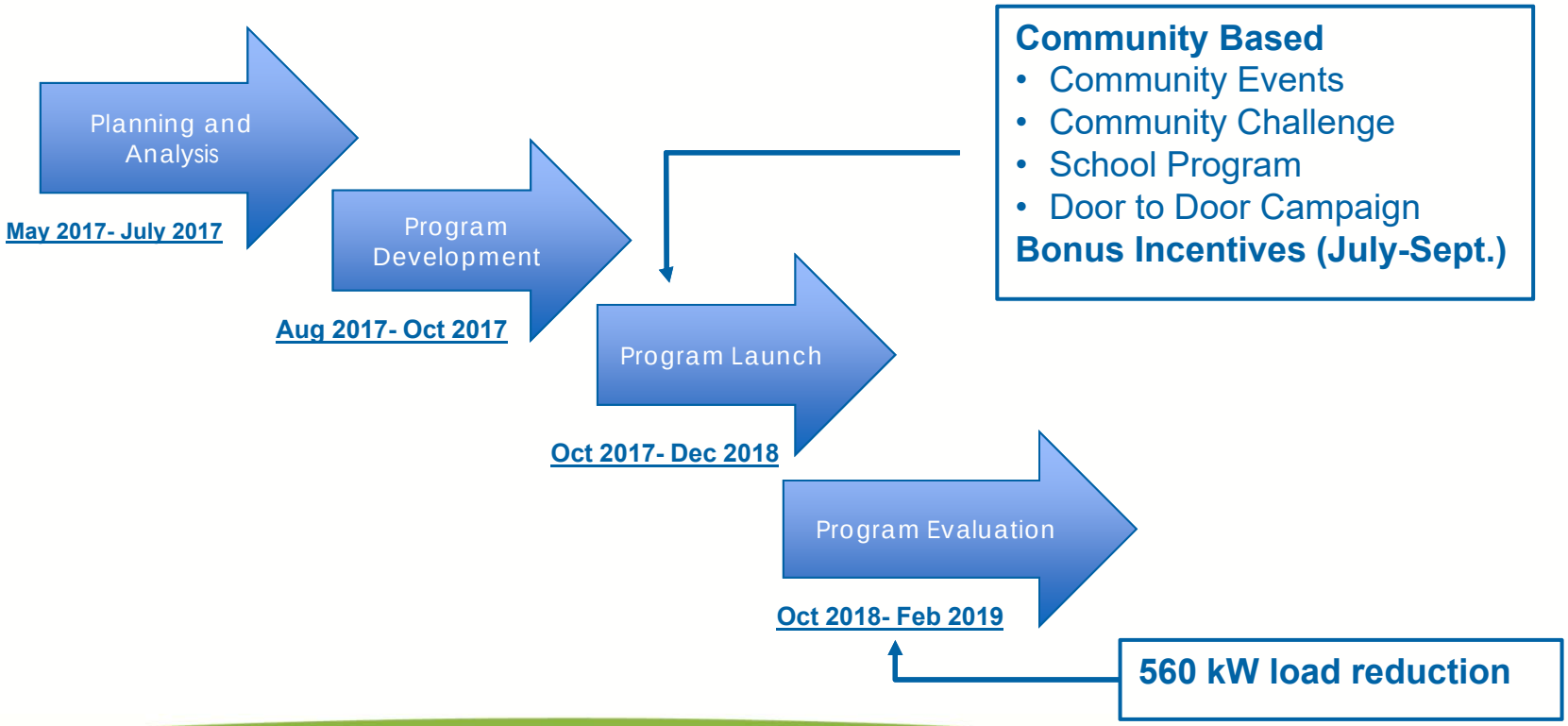
Load Reduction

- Target (2018) - 1.5MW
- Achieved (2018)– 560kW (measure savings)

Where is Swartz Creek?



Swartz Creek Timeline/Approach



Lessons Learned

- Data driven Distributed Energy Resource (DER) analysis alone may not paint a full picture
  - Use of field visits cross referenced with site analysis are needed to establish realistic goals, strategies, and tactics
- Hyper marketing and approach may not be enough
  - Enable bonus incentives early on
- A “diverse” community will allow for better Pilot learning
  - Range of customers for both residential and C&I
- Direct interactions with C&I customers are optimal
  - Use assessment team to educate C&I customers
  - One-on-one interactions with C&I customers are most effective
  - Cover all in first interaction
- System peaks may occur outside of DR program windows

Pilot #2: Four Mile

Four Mile Overview

~4250 Accounts

- Diverse Community

~3500 Residential Accounts

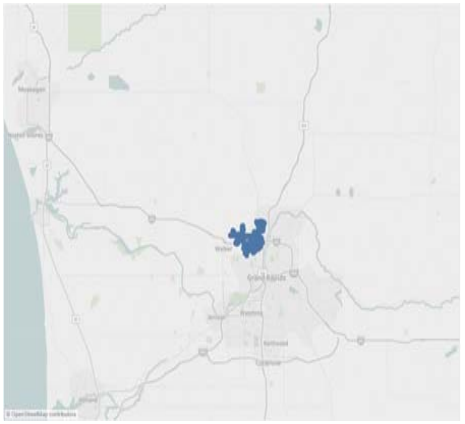
- 18% of total kWh

~750 C&I Accounts

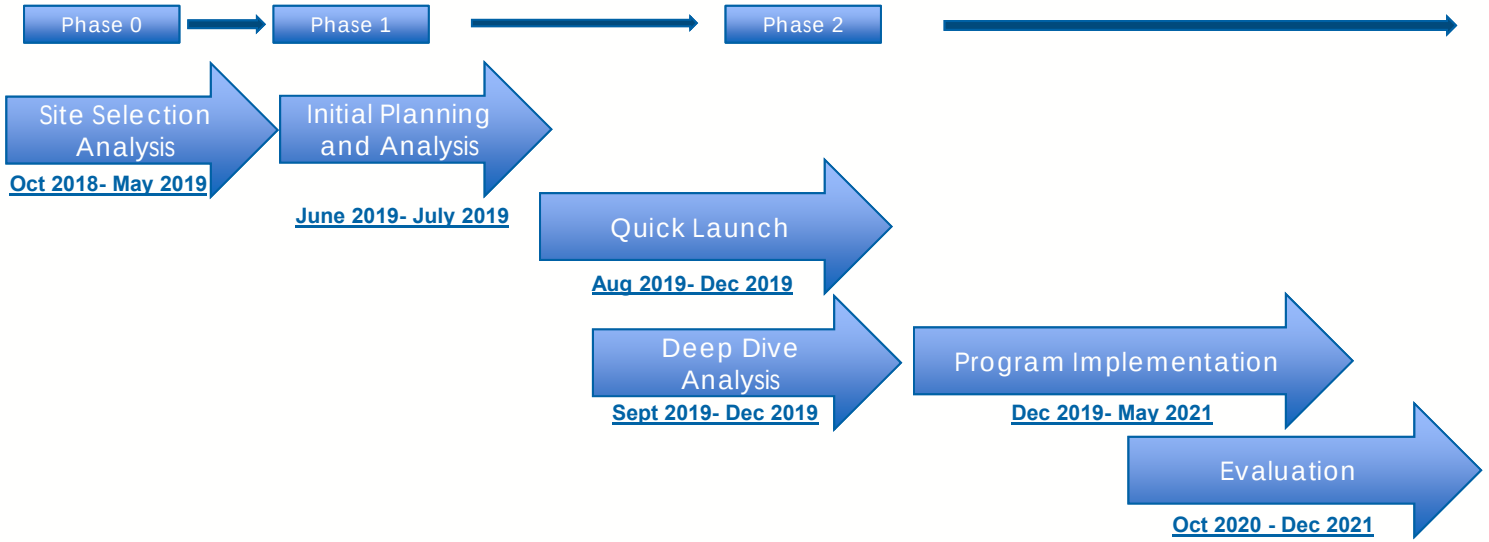
- 82% of total kWh
- ~250 Medium and Large accounts
- ~500 Small accounts

Load Reduction

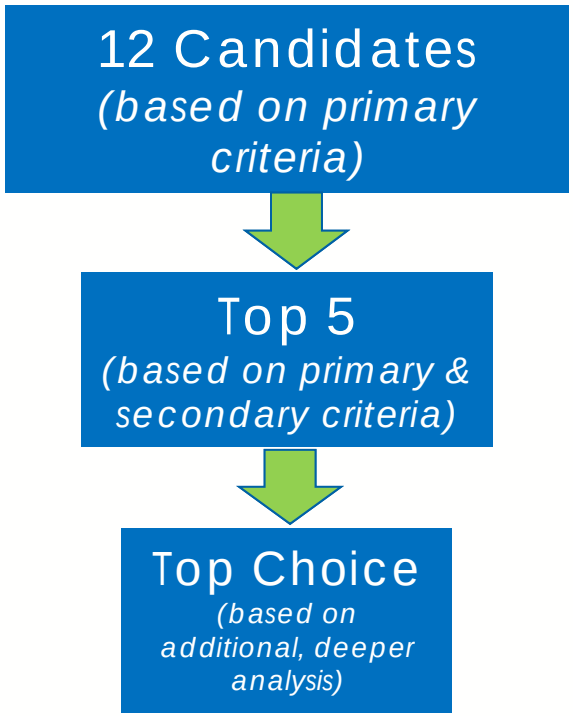
- Target (2024) - .34MW



Four Mile Timeline



Site Selection Process and Criteria



Primary Criteria

- 5-20% estimated load relief needed
- $1 to $3 million project cost
- 3 to 5 years until project needed

Secondary Criteria

- Supervisory control and data acquisition (DSCADA) data for substation available
- Mix of customers
  - At least 60% business load
  - Not dominated by lower income

Four Mile Quick Launch Tactics

1. Significantly increased several C&I EWR incentives up to $1,000

2. Significantly increased Residential EWR incentives for AC Replacements, DR and Appliance Recycling

3. Engaged Trade Allies and CE Account Management Team

Residential Bonus Incentives		
Measure	**Typical Incentive**	**NWS Total Incentive**
HVAC- 14.5-14.99 SEER	$50	**$100**
HVAC- 15.0-15.99 SEER	$150	**$300**
HVAC- 16.0-16.99 SEER	$200	**$400**
HVAC- 17.0 - 18.99 SEER	$400	**$800**
HVAC- 19.0-20.99 SEER	$450	**$900**
HVAC- 21.0 SEER or Higher	$500	**$1,000**
AC Peak Cycling	$25	**$50**
Appliance Recycling	$50	**$75**

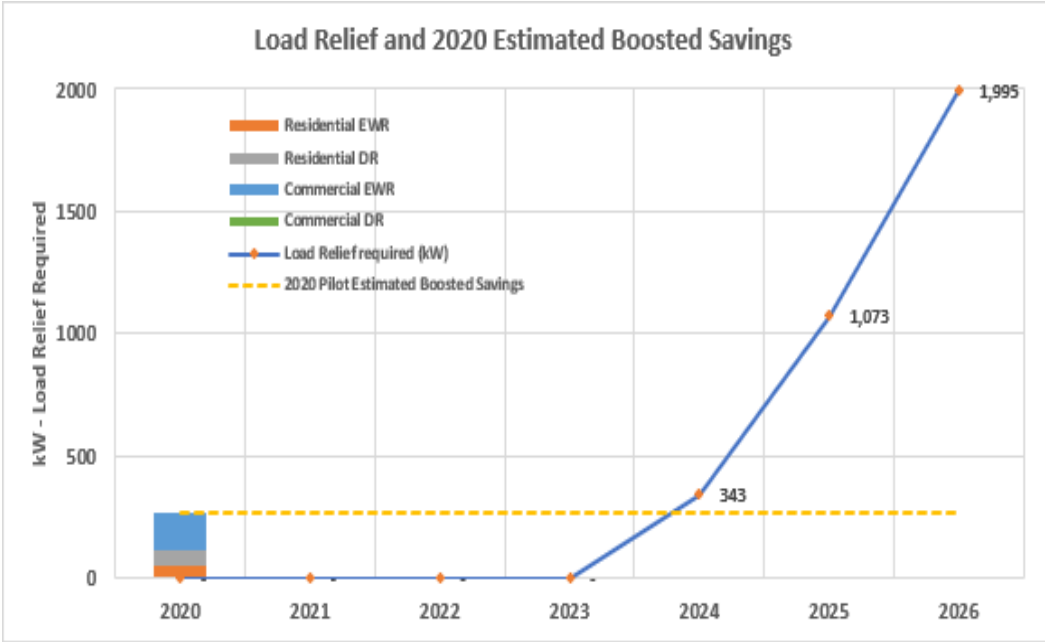
Deep Dive Analysis

Three part analysis conducted fall of 2019

Task 1 - Construct combined utility and customer data set for comprehensive analysis. Identify customer segments most influential to timing and magnitude of substation need.

Task 2 - Apply combinations of Demand Side Management (DSM) measures to understand potential contributions to load reduction at peak. Estimate participation levels and determine cost-effective incentives.

Task 3 - Finalize full portfolio of DSM measures and design NWS program for deployment including measures, bonus incentives, and general implementation/marketing approach.



Expected Savings for 2020 – 270kW boosted by NWS

2020 Customer Acquisition Approach

- More direct messaging –"Why are we doing this?"
- Utilizing customer segments and propensity scores to inform customer acquisition plan
- Trade Ally Engagement
- C&I Focus
- Specific targeting of multifamily property management and residents
- Cross promotion of EWR and DR
- Piloting C&I Economic DR

Looking Ahead - NWS Working Group

Developing a cross-functional internal working group to support NWS planning and implementation

Vision – Plan and deploy NWS

Purpose – Develop a comprehensive NWS strategy integrating efforts into an efficient and scalable process

Questions to Answer - What does NWS maturity look like? What roles and capabilities are required in each business function (engineering, operations, customer, regulatory) to successfully deploy NWS?

Questions

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