

**NY Prize  
Village of Westfield  
Microgrid Feasibility Study**

Brookhaven National Laboratory

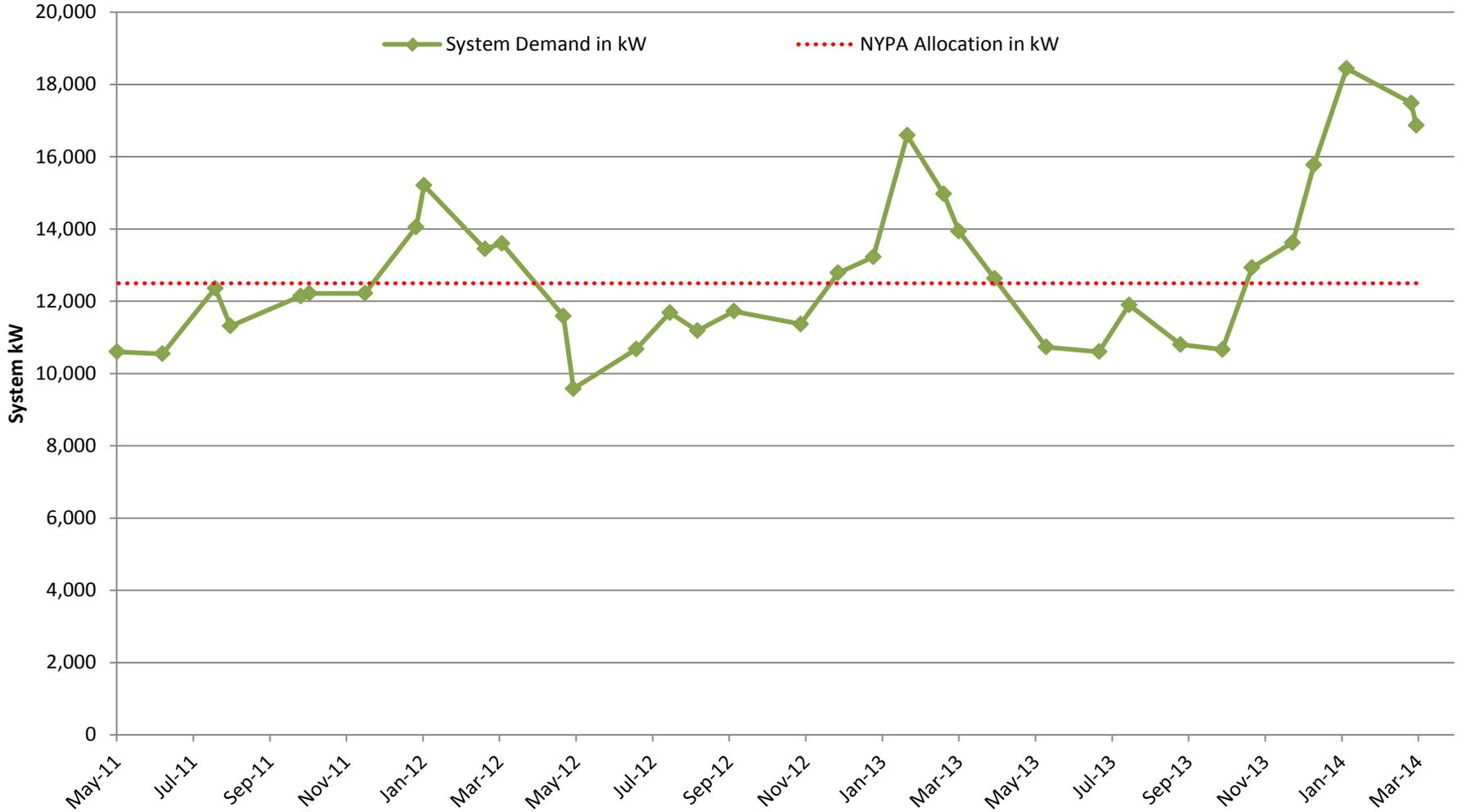
October 8, 2015

# Westfield Overview

- Serves 3200 total metered accounts (~2800 residential)
- 2014 NYPA allocations:
  - 12.5 MW
  - 6,850,000 kWh/month
- Winter peaking load profile:
  - 15 MW to 18+ MW
  - 9,796,366 kWh/month (Jan 2015)
- 50%+ of the Residential Feeders are near capacity with momentary overloading of distribution transformers
- Incurred \$1MM of unplanned expenses to purchase consumption above allocations (NYMPA)
- Single transmission feeder

# Demand Profile

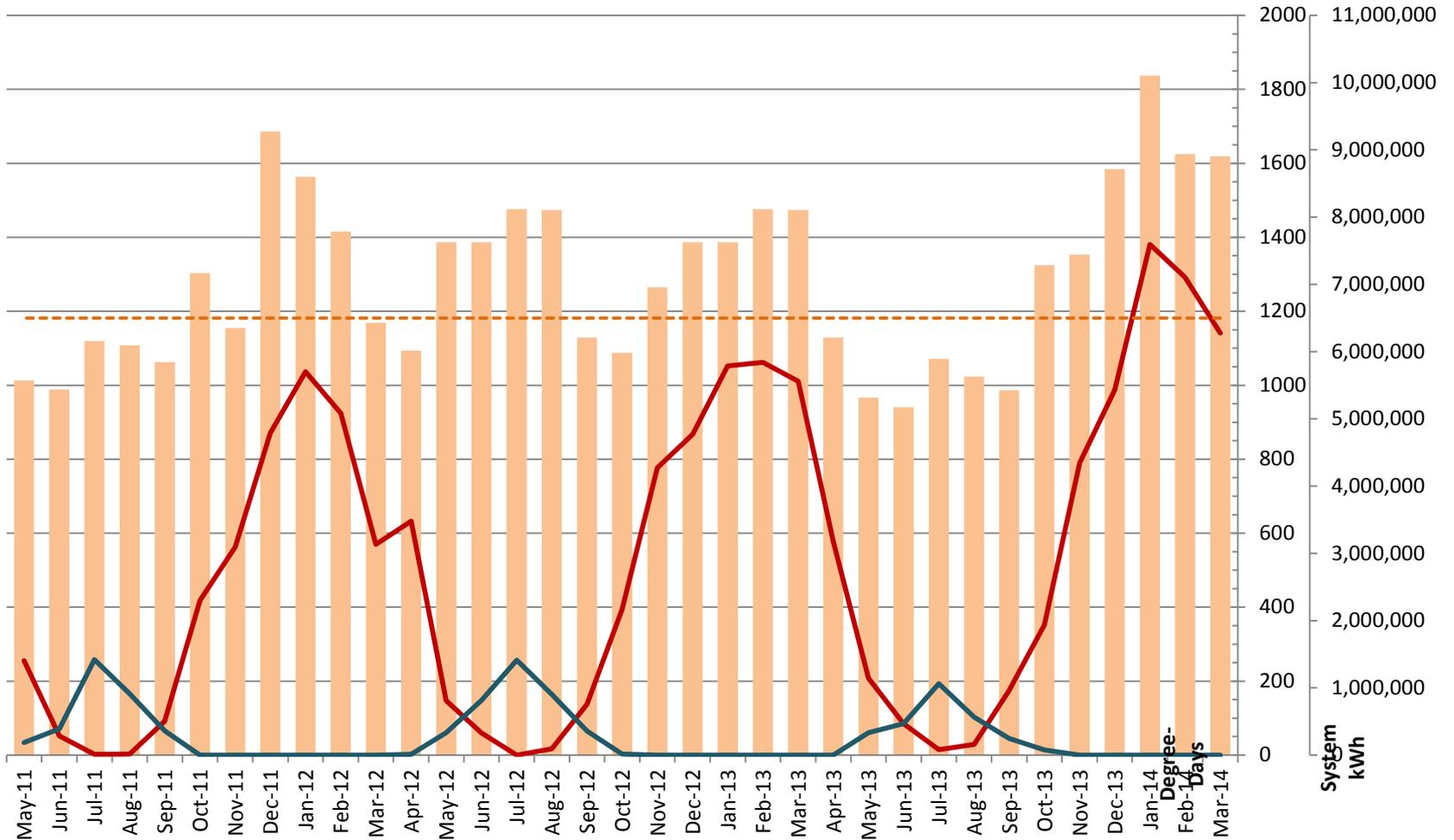
## Westfield Electric Department System kW Profile



# Load Profile

## Westfield Electric Department System kWh Profile

System kWh    Total HDD    Total CDD    NYPA Allocation in kWh



Westfield Microgrid Feasibility 10/07/2015

# Critical Facility Loads



# Critical Facility Loads

Westfield Critical Facilities	2014 Electricity Consumption		Generator Capacity and Fuel	
	Max kW	Total kWh	Capacity (kW)	Fuel
Electric Department	Not Metered	Not Metered	48	Natural gas
Wastewater Treatment Plant	744	3,192,000	1,200	Diesel
Water Treatment Plant	476	478,000	300	Diesel
Village Office	52	184,080	60	Diesel
Police Department	<i>See above</i>	<i>See above</i>	125	Diesel
Fire Department	72	162,000	125	Diesel
Memorial Hospital	216	1,090,400	200	Diesel
Westfield Central School	376	1,547,200	125	Natural gas
<b>TOTAL</b>	<b>1,936</b>	<b>6,653,680</b>	<b>2,183</b>	

# Westfield Community Team

