Upper Peninsula Power Company

Stakeholder Outreach

January 2018

Powering our communities since 1884

UPPCO History

1884 – Peninsula Electric Light and Power Company was formed (aka Houghton County Electric Light Company)

1947 – Upper Peninsula Power Company was formed through the merger of Houghton County Electric Light Company, Copper District Power Company and Iron Range Light and Power

1998 – UPPCO was acquired by Wisconsin Public Service Resources Corporation (Integrys)

August 2014 – UPPCO began the process of returning to its roots as a stand-alone, U.P. based utility

February 2017 – UPPCO returned to a fully independent, U.P. based electric utility

Company Overview

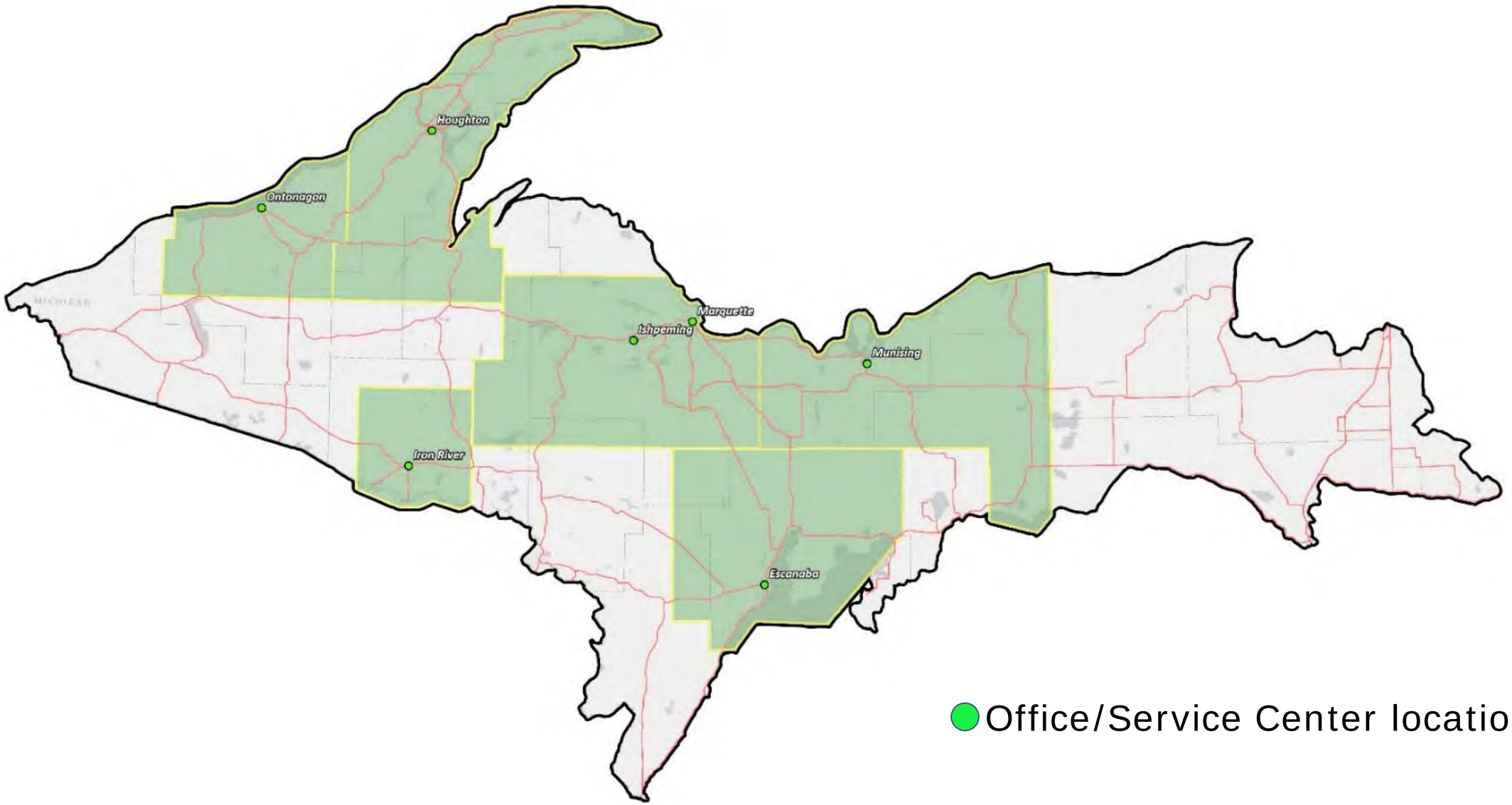
- UPPCO provides safe and reliable energy to ~52,000 customers in 10 U.P. counties

- UPPCO's service territory covers 4,460 square miles

- UPPCO serves approximately 12 customers per square mile

- UPPCO owns 4,469 miles of distribution lines and 58 substations

Service Territory



Transition Update

- Fully independent from Integrys in February 2017
- Current Employee Count: 173
  - 121 at acquisition in August 2014
  - 52 employees added during the transition period
- Functions moved back to the U.P.:

Accounting	Procurement
Finance	Legal
Engineering	Information Technology
Safety	Generation Engineering
Human Resources	Regulatory Affairs
System Operations	Communications
Customer Service	Executive

Community Involvement

- Consistently donates over $100,000 on an annual basis to support our local communities
- Employees contribute to United Way Campaigns
  - 2017 contributions with company match exceeded $40,000
- UPPCO/Michigan Tech Collaboration
  - Senior Design team is evaluating potential expansion at Prickett and Victoria hydrogeneration facilities
  - Student team is evaluating the feasibility of a Community Solar project through the Alternative Energy Enterprise
- Industry Partner in the Line-Technician program at Sawyer
- Industry Partner in the Power-Technician program at the Jacobetti Center

What is an Integrated Resource Plan?

- <u>What is an Integrated Resource Plan (IRP)?</u>
  - An IRP is a process that a utility uses to evaluate how it will best serve its customers' future power needs
  - As part of this process, and through predictive modeling, UPPCO will evaluate several resource alternatives to develop a plan that meets our customers' future power needs
- <u>Why perform an IRP at this time?</u>
  - As a stand-alone, U.P. based utility, UPPCO recognizes the value of planning for its future power needs
  - UPPCO is developing its IRP and is actively seeking stakeholder feedback as part of the process

IRP Stakeholder Forums

- "Open House" setting where customers and stakeholders can speak to UPPCO staff to obtain information on various topics:
  - Customer Service
  - Energy Waste Reduction (EWR)
  - Generation Fleet
  - Regulatory/Integrated Resource Planning
  - Path-to-Ground safety demonstration

Questions Resolved through the IRP

- How much generation will UPPCO need to meet the future needs of its customers?
- When should existing generation be retired?
- When will additional generation resources be required?
- How much generation Capacity should be company-owned?
- How much Energy should be produced by company-owned generation?

Questions Resolved through the IRP

- What opportunities and risks need to be managed to ensure long-term price stability for UPPCO customers?
- What types of resources will safely, reliably and economically meet the future needs of the customers?
- What renewable energy resources (hydro, solar, wind, biomass, storage, etc.) should be included for the future?

Regulatory Outlook

- Energy Waste Reduction Plan (pending)
- Renewable Energy Plan (targeting January 2018)
- Integrated Resource Plan (targeting Q2 2018)
- Current business drivers being monitored:
  - Reduction in sales volumes
  - General inflation and capital investments
  - Deployment of Advanced Metering Infrastructure (AMI)
  - Operating and Maintenance reductions through various management initiatives
  - Changes to federal tax laws

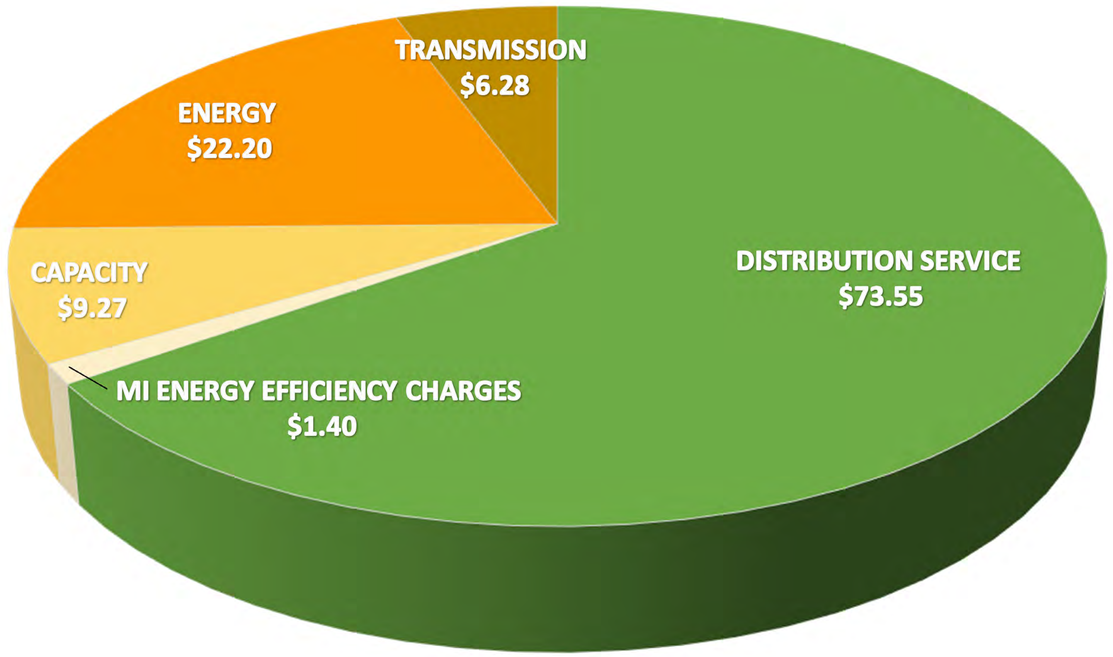
2018 Rate Reductions

Typical Monthly Bill						
Customer Class		**Typical Usage (kWh)**	**Typical Demand (kW)**	**Jan-17**	**Jan-18**	**Reduction**
Residential	A1	500	N/A	$120	$113	-6%
Small Commercial	C1	1,500	N/A	$268	$233	-13%
Medium Commercial	P1	14,000	40	$1,987	$1,689	-15%
Large Industrial	CPU	400,000	1,000	$44,915	$34,323	-24%

- Rate reductions are due to renegotiated Power Supply contracts, changes to UPPCO's Energy Waste Reduction (EWR) program (MPSC Order anticipated in February) and the Federal Energy Regulatory Commission's recent decision in the Presque Isle SSR complaint

- Additional reductions may result from the recent passage of the new federal tax law

Breakdown of a Residential Bill



Breakdown of your UPPCO Bill		
Distribution		Cost of "delivering" power to your meter through UPPCO-owned utility assets (poles, wires, transformers, substations, vehicles and equipment, personnel, service centers, etc.)
MI Energy Efficiency Charges		Cost of UPPCO's energy efficiency program
Power Supply Charges	Capacity (MW)	Capacity is the amount of generation the company has available to serve load and is measured in megawatts (MW). It represents UPPCO's ability to generate electricity, as needed.
	Energy (MWh)	Energy is the amount (volume) of electricity that customers use over time. It is measured in megawatt-hours (MWh).
	Transmission	Cost of moving electricity from generation resources to distribution substations located throughout the region.

Represents 500 kWh usage for a monthly bill total of $112.70

Understanding a Residential Bill

Historical monthly energy usage.

This area is the budget billing summary.

Budget balance after payment of current bill.

Important bill messages located here.

This customer is on autopay using the new UPPCO Online Portal.

This area is the current billing summary.

Upper Peninsula Power Company

Contact us:
www.uppco.com
customerservice@uppco.com
800-562-7680 7AM-6PM Eastern Time - Mon-Fri
Payments: PO Box 60055, Prescott AZ 86304-6055

Service Address:
John Doe
1234 Jones Street
Ishpeming, MI 49849

Amount to be withdrawn on 01/10/2018 $70.00

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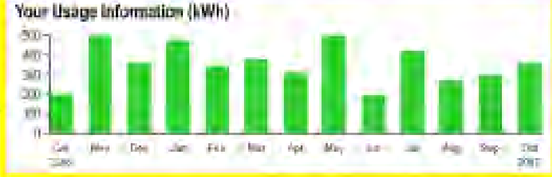
Account No	Transfer Date	Transfer Amount
DDDDDDDDD	01/10/2018	$70.00

Your Usage Information (kWh)



Comparison	Days	kWh	Avg kWh / Day
Current Bill Period	41	500	12.2
Same Period Last Year	-	-	-

Budget Summary Month 00		
Total Current Charges	$	124.12
Budget Amount Billed	$	70.00
Difference	=	54.12
Budget Correction	$	0.00
Previous Budget Balance	$	0.00
New Budget Balance	$	54.12

After paying this bill, you have used more energy than you have paid for.

Your Account Summary		
Previous Charges		
Amount of your Last Bill	$	0.00
Payment Received	$	0.00
Past Due Amount	$	0.00
Current Charges		
Electric Charges	$	70.00
Total Current Charge	$	70.00
Total *(includes current and past due charges)*	$	70.00

Important Messages:

- Energy Use information is based on an estimated meter reading. Your actual use may be different.
- You have a credit balance on your account. We will reduce your next bill total by this amount.
- Spread your energy costs over 12 months by enrolling in Budget Billing. Enroll online at uppco.com or by calling 800-562-7680.

UPPCO Online Portal

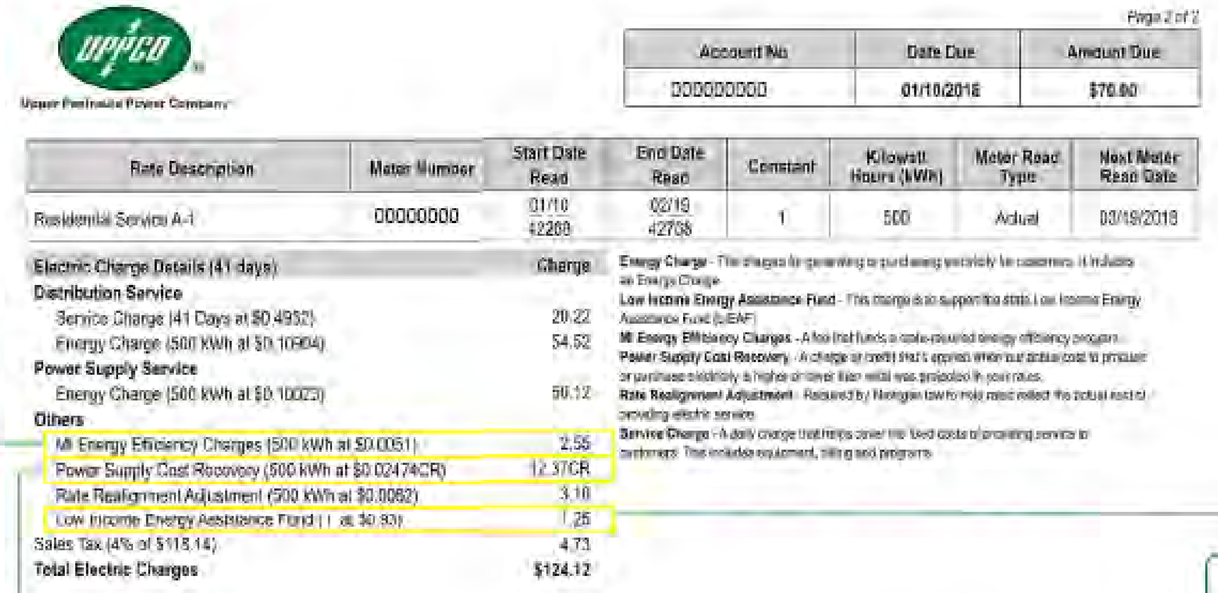
Manage your account ANYTIME, ANYWHERE from ANY DEVICE.

- Sign up for e-Bill paperless billing
- Schedule electronic payments
- Report an outage
- View energy consumption

Become a *new* portal user today at www.uppco.com

Front of Bill

Understanding a Residential Bill



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Upper Peninsula Power Company

Account No	Date Due	Amount Due
000000000	01/10/2018	$70.00

Rate Description	Meter Number	Start Date Read	End Date Read	Constant	Kilowatt Hours (kWh)	Meter Read Type	Next Meter Read Date
Residential Service A-1	00000000	01/10 42200	02/19 42708	1	500	Actual	03/19/2018

Electric Charge Details (41 days)	Charge
Distribution Service	
Service Charge (41 Days at $0.4932)	20.22
Energy Charge (500 kWh at $0.10904)	54.52
Power Supply Service	
Energy Charge (500 kWh at $0.10023)	50.12
Others	
MI Energy Efficiency Charges (500 kWh at $0.0051)	2.55
Power Supply Cost Recovery (500 kWh at $0.02474CR)	12.37CR
Rate Realignment Adjustment (500 kWh at $0.0062)	3.10
Low Income Energy Assistance Fund ((at $0.93)	1.25
Sales Tax (4% of $118.14)	4.73
Total Electric Charges	**$124.12**

Energy Charge - The charges for generating or purchasing electricity for customers. It includes an Energy Charge.

Low Income Energy Assistance Fund - This charge is to support the state Low Income Energy Assistance Fund (LIEAF).

MI Energy Efficiency Charges - A fee that funds a state-required energy efficiency program.

Power Supply Cost Recovery - A charge or credit that's applied when our actual cost to produce or purchase electricity is higher or lower than what was projected in your rates.

Rate Realignment Adjustment - Required by Michigan law to help make sure that the actual cost to provide electric service.

Service Charge - A daily charge that helps cover the fixed costs of providing service to customers. This includes equipment, billing and programs.

MI Energy Efficiency is the cost of UPPCO's Energy Waste Reduction (EWR) program. This program offers rebate incentives on energy saving products and services. Learn more at: www.efficiencyunited.com

Power Supply Cost Recovery (PSCR) charges represent the increase or decrease in actual Power Supply costs versus projected costs. In 2018, UPPCO is forecasting a decrease of approximately $5.5 million which will result in greater savings for the customer.

Low Income Energy Assistance Fund (LIEAF) provides energy assistance and self-sufficiency services to low-income households in Michigan.

Back of Bill

Energy Waste Reduction

Energy Waste Reduction

Home energy use breakdown

Device	Energy used
Heating System	26 percent
Cooling System	17 percent
Appliances	14 percent
Water Heater	13 percent
Lighting	10 percent
Electronics	7 percent
Other	13 percent

Lightbulb efficiency comparison

Least efficient → Most efficient

Bulb Type	Incandescent	Halogen	CFL	LED
				
	Energy Used			
Bright → Brightest				
450 Lumens	40w $9.86yr	29w $7.14/yr	11w $2.71/yr	6w $1.48/yr
800 Lumens	60w $14.78/yr	43w $10.59/yr	13w $3.20/yr	9w $2.22/yr
1100 Lumens	75w $18.48/yr	53w $13.06/yr	20w $4.93/yr	12w $2.96/yr
1600 Lumens	100w $24.64/yr	72w $17.74/yr	23w $5.67/yr	14w $3.45/yr
Longevity	1 Year	1-3 Year	6-10 Year	15-20 Year

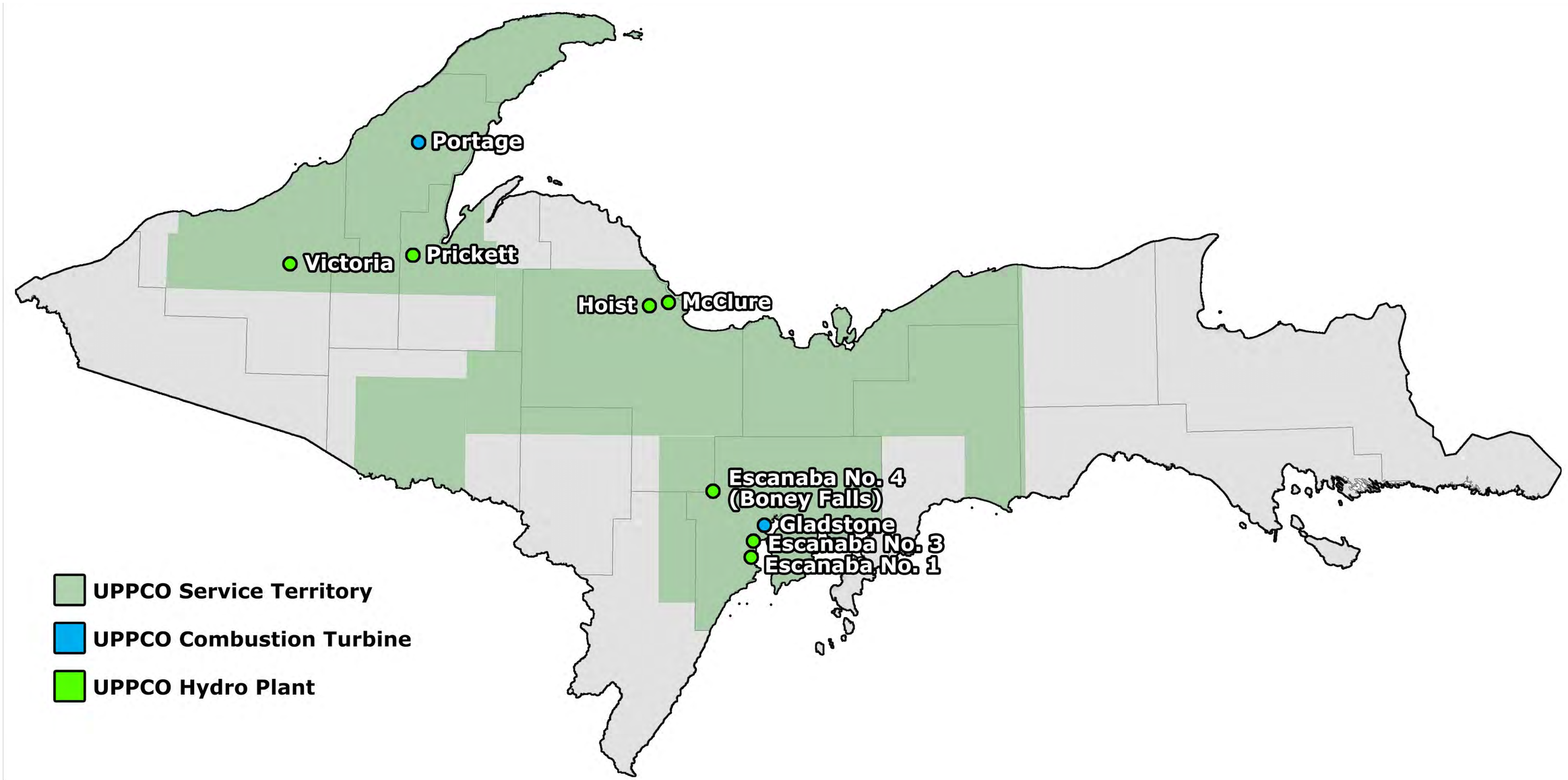
Estimated energy cost per year is based on three hours of use per day at Upper Peninsula Power Company's A-1 Residential Rate of 22.5 cents per kWh in an average single family home using an average of 500 kWh per month.

Generation Fleet

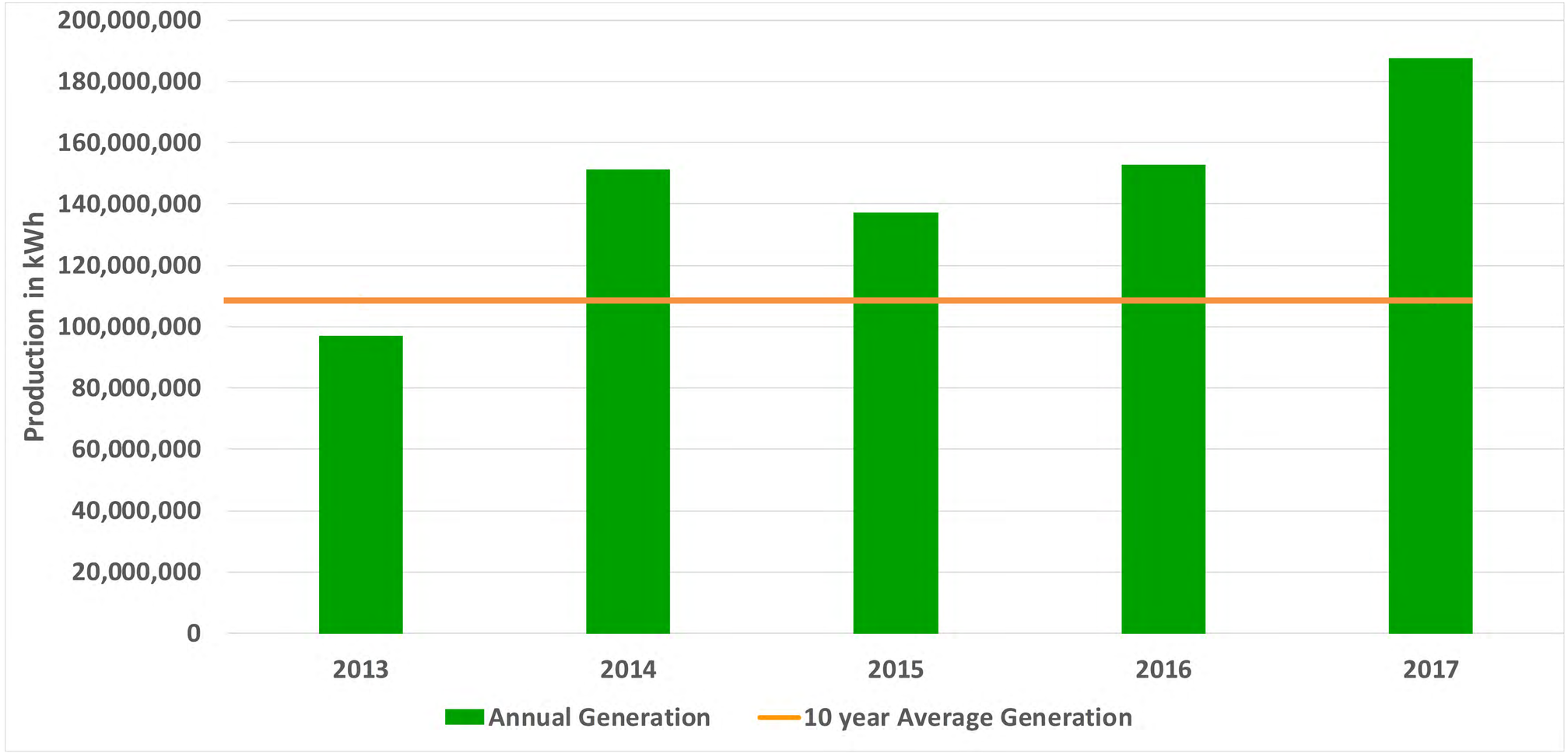
Station	Type	Units	Date Built	Capacity (kW)
Hoist	Hydroelectric	2	1916	3,400
McClure	Hydroelectric	2	1919	8,480
Prickett	Hydroelectric	2	1931	2,000
Victoria	Hydroelectric	2	1930	12,200
Boney Falls	Hydroelectric	3	1921	4,100
Escanaba 3	Hydroelectric	2	1914	2,500
Escanaba 1	Hydroelectric	3	1907/1920	1,600
Gladstone	Combustion Turbine	1	1975/1987	22,567*
Portage	Combustion Turbine	1	1971	23,800*

- UPPCO owned generation provides approximately 18% of annual energy requirement
- Additional generation resources being evaluated via the Integrated Resource Plan
- * Denotes reported winter capacity

Generation Fleet



2017 Strong Hydro Performance



2017 represents an increase of ~75% over the 10 year average