

LED LIGHTING
**The State of led tariffs and
deployment by investor-owned
utilities in Indiana**
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LED Streetlight Program in Northern Indiana

- ▶ Had its genesis in 2008 when Property Tax Reforms were passed by the legislature
 1. State Imposed a Levy Freeze in Lake County in 2007
 2. Circuit Breaker tax caps were passed in 2008, limiting tax relief to municipalities
 3. Home values decreased due to the great recession which started in 2008

LED Streetlight Program in Northern Indiana

I AM NOT A LAWYER

However,

- **Indiana Code 36-9-9-9 requires that payments for streetlight costs be made from the General Fund or a fund set aside for the purpose of paying these lighting costs.**
- **The costs of street lighting directly competes with Public Safety dollars.**

LED Streetlight Program in Northern Indiana

In 2007 I found the Rate Class Distribution of the Costs resulting from a 2005 settlement between NIPSCO and numerous intervening groups of affected customers (no Municipalities). This showed that the Rate 650, Street lighting and traffic signal lighting were significantly subsidizing other classes of customer.

When I read in the Memorandum of Understanding that NIPSCO was filing a base rate case in 2007/2008 I visited a number of Municipalities in Lake County and found some willing to support an intervention in the case.

I hired an attorney and the best Cost Of Service witness in the State of Indiana with a mission of representing these Municipalities in reducing the cost increase to their street light budgets.



LED Streetlight Program in Northern Indiana

From 2008 through 2011 our group of 8 Cities and Towns participated in two base rate cases in front of the IURC. We were successful in severely limiting the cost increase to the street light rates.

Following the last base rate case our group decided to look into street lights:

1. Town of Highland
2. Purdue Energy Center
3. Then the Town of Schererville, Dyer, Munster, Griffith, Winfield and the Cities of East Chicago and Valparaiso.

LED Streetlight Program in Northern Indiana

Senate Bill 560 Became Effective on July 1, 2013

- Among other things, allowed for a Transmission, Distribution and Storage System Improvement Charge (TDSIC).
- Allowed for recovery of Distribution System Improvements. At our request, Streetlights were found to be Distribution System costs.
- Worked with Dr. Kramer, NIPSCO and other parties to the proceeding (44733) to fashion a stipulation which is as follow:

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- NIPSCO to change out its 42,500 HPS lights to LED over 7 years.
- Our group, the Indiana Municipal Utility Group (IMUG) was to work with NIPSCO in the issuance of RFP's for fixture and Installation.
- While not in the IURC order, our group was to collaborate with NIPSCO to identify best fixture and most reasonable installation package.
- 50% of the cost of the installed fixture to be “socialized”.
- Resulting tariff comparisons are as follows:

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	Company Owned						
HPS	Equivalent LED	Monthly HPS	Monthly LED				
Wattage	Wattage	Cost	Replacement				
100	Up to 50	\$ 12.35	\$ 7.55				
150	70-90	\$ 12.58	\$ 7.94				
250	91-115	\$ 12.70	\$ 8.47				
400	180-210	\$ 12.62	\$ 10.47				

Plus Energy Charge at \$0.034225 per kWh for all kWh's used per month



LED Streetlight tariffs in place for Investor owned utilities Duke energy

- Since September 1, 2004 if you desire street lights you must contract with Duke Energy for service.
- Customer must enter into an agreement with Duke Energy whereby Duke Energy owns or Customer owns the lighting.
- Duke Energy has a catalog from which you can choose fixtures.
- Duke Energy will advise you as to the amount your proposed installation will cost.

Duke Energy

- Duke Energy will give you options for payback periods.
- For all practical purposes Duke Energy is approaching being unregulated as it relates to street lighting.
- The contracts I have seen between Duke Energy and its municipal customers are for LED lighting and do not seem unreasonable.
- Duke Energy has not had a base rate case since 2003/2004 so no one has challenged this treatment of street lighting.

Vectren south (Sigeco)

- Vectren owns all of the street lights in its service territory.
- On December 8th of 2017 Vectren South filed under the IURC 30 Day process for LED rates. Filing was approved on January 10, 2018.
- LED Rates for Overhead and Underground construction are on the average 7.1% **lower than High Pressure Sodium rates.**
- Most common 100W HPS and 200W HPS have LED equivalents that average 23.25% and 14.03% less than their comparable HPS fixtures.
- Only drawback is that this tariff is only available on fully depreciated lights.

Indianapolis Power and Light

- ▶ Prior to the current base rate case (Cause No. 45029), IPL had one tariff item for LED lighting, and that was the ornamental 4-head fixtures that line the perimeter of the Circle downtown.
- ▶ In the current proceeding IPL has a number of LED tariff offerings, but none seem particularly attractive. It is offering a Vintage (existing under older rate structure) 100 W HPS lamp for \$107.28 annually, while Vectren is offering a similar HPS lamp for \$77.87 annually, and an LED equivalent for \$53.61.
- ▶ IPL is offering new 100 W HPS lamps for \$306.60 annually and an equivalent LED lamp for \$223.92 annually when paired with additional facilities.

Indiana Michigan Power Company

- Indiana Michigan Power Company (I & M) had no LED tariffs until the order in cause number 44841, on September 20, 2017.
- This was an IURC order on the Demand Side Management (DSM) plan where the IURC put out something of a hybrid decision called the “Public Efficient Street Lighting Program which works as follows:
 - Municipality requesting service must pay 10% upfront of incremental LED fixture costs.
 - 10% of incremental LED fixture costs will be reflected in rate tariffs.
 - 80% of incremental LED fixture costs will be absorbed by the rebates offered within the DSM plan.

Indiana Michigan Power Company

- The approach by IURC and the parties to the DSM case is a bit of an odd duck.
 - Cost of incremental fixture costs should go down. How is that reflected in the DSM program calculations?
 - It offers LED lighting, but not through its tariffs. Other than Duke Energy who has no LED tariffs (Done through contract), it is the only Investor Owned Utility to reflect the LED's through some mechanism not addressed within the tariffs.
 - Will be difficult for potential customers to identify that it exists.
 - LED tariff cost will be pegged to HPS fixture cost.

Indiana Michigan Power Company

- The approach by IURC and the parties to the DSM case is a bit of an odd duck.
- There is no indication that this approach will change as a result of the base rate case.
- How does this mechanism account for reduced LED fixture costs and increased HPS costs?

SUMMARY

- My Opinion
- There are still a lot of disparity between how the Investor Owned Utilities view LED Tariffs.
- NIPSCO and Vectren have Tariffs in place that incent LED's.
- We have a good start to putting in place tariffs that are helpful to the reasonably priced deployment of LED's.
- It is very important that LED's being deployed are the best fixtures available.
- That brings us to Dr. Kramer!

LED Streetlight Program in Northern Indiana Tariffs

**March 7th 2018
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