April 22nd, 2020

Mary M. Becerra
Secretary to the Commission
Indiana Utility Regulatory Commission
PNC Center
101 W. Washington Street, Suite 1500 East
Indianapolis, Indiana 46204

IE: Vectren 30-Day Rate Cause #50331 & #50332

Dear Ms. Becerra,

Please accept this letter as an objection and testimony for Vectren's pending, 30-day rate filings #50331 and #50332 pertaining to the valuation of solar energy produced by residential, business and government customers (all customer classes) in Vectren service territory in SW Indiana. The EDG rate that Vectren has requested is much too low and does not represent the true value of solar energy from many different aspects. We are requesting an unbiased study and analysis of this value based upon several different factors which I will outline in this testimony.

Background – Morton Solar is one of the oldest solar energy contractors in Indiana and installed some of the first solar energy systems in the state. We are located in Evansville, Indiana, which is the heart of Indiana's coal industry. We are a member/owner of Amicus Solar Cooperative and one of the first Certified B Corporations in Indiana. Our mission has always been to lower the cost of renewable energy to make it accessible to all and use our business as a force for good.

One of our first project's in 2008 was to install a small residential scale wind turbine at the Haubstadt Community School in Gibson County. The project was concepted by a 3rd grade class taught by Donya Bengert and funds were raised by students collecting pennies from donations across local area businesses. A grant was also obtained by the Toyota Motor Foundation. Even though the state net-metering law at the time required investor-owned

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utilities to net-meter with schools and residential customers, the application was denied by Vectren on the basis that the school had 3-phase service. Upon review of the Indiana Administrative Code and Indiana's Net-Metering law, the type of service should not have been a condition to deny a net-metering application. Morton Solar's only recourse was to file a complaint with the Indiana Utility Regulatory Commission, which we did, and fortunately the IURC ruled in our favor (see attached letter as Exhibit A from Dr. Bradley Borum, Director of Electricity IURC). As a result of this ruling, Vectren was forced to re-write their tariff to include 3-phase services for net-metering, and this project was permitted to move forward.

As a result of this case, Morton Solar was granted an award from Senator Lugar's office called the *Senator Lugar Energy Patriot.* This award gave us a strong conservative voice and platform for renewable energy in Indiana. We used that voice to get the attention of Dr. Sue Ellspermann who worked in the marketing department at University of Southern Indiana. With her help, we were able to get a library project near Rockport, Indiana documented as the 1st net-zero solar powered library in the United States, at a time when a majority of Hoosiers didn't believe Indiana was suitable for solar energy. Later, Dr. Ellspermann was able to get the attention of Lt. Governor Becky Skillman with this project and it was given *The Partner in Progress Award* from Governor Daniels office.

With this solar project, located only five miles where a new coal-to-gas plant was to be built in Rockport, Indiana, Morton Solar was able to open a channel of communication to the Governor's office. Our message was:

> "Gov. Daniels, if you want to build another coal plant in our region and you are for an 'all-of-the-above' energy policy, you should also expand Indiana's net-metering law to allow more use of solar energy. Net-metering will provide a tiny bit of competition in an energy market dominated by monopolies, which have no place in free-market capitalistic systems. Competition is a fundamental requirement in capitalism. Where monopolies exist, capitalism fails."

In July of 2011, Gov. Daniels issued an executive order to the IURC to expand this net-metering law to allow ALL customer classes of Investor-Owned Utilities the ability to net-meter with solar energy systems sized up to 1MW. Now looking back almost 10 years, we can see the tremendous success of this executive order, which built the foundation for an entire solar industry in Indiana. With over a thousand jobs and several businesses created, this policy may have been the most successful of Governor Daniel's career and he deserves credit and recognition for this.

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It can be argued that another successful outcome of this net-metering law was the stabilization of electricity rates in SW Indiana. From the IURC's own Residential Rate Survey's, you can see that Vectren's rates increased 109% from 2001-2011 (See attached *2011 Residential Rate Survey* as Exhibit B). However, from 2010-2019, Vectren's rate increase was only 15% (See attached *2019 Residential Rate Survey* as Exhibit C). Is this just a coincidence, or is free-market capitalism with competition helping keep Vectren's rates in check? The case is too strong to deny that the threat of Vectren's customers being able to install solar energy systems on the load side of their meter is NOT an incentive for them to keep their rates lower.

SB309 Passed on False Information – now that the IURC has been tasked with determining the value of solar energy due to Indiana's legislature passing SB309. Let us look at the false information that was distributed to the politicians and public about the use of solar energy. The utility lobbyists claimed that solar energy producers shift costs to non-solar energy consumers. You, the IURC, should know that this claim is categorically false, as you have never approved of any rate structure or tariff that would allow this to happen. You, the IURC, oversees and approves of each and every rate structure put in place by every Investor-Owned Utility in the state. And you, the IURC, knows that there is NO rate structure that would allow cost shifting. This is categorically false information based on that fact alone. The main objective of SB309 was maintaining monopoly status and eventually, be able to monopolize solar. The goal of SB309 was to eliminate ALL competition so that there is no other choice but to purchase solar energy from one source only, and that is the utility company. They will be able to increase their rates to whatever profit margin they see fit without the threat of customer generated solar energy systems. In reality, distributed solar generation benefits the power grid by lowering excessive loads on transformers and power lines resulting is less line loss. This is an inherent financial benefit to utility companies that has not been taken into consideration during the debate of SB309.

As an example of desire of utilities to achieve and maintain monopoly status, please reference IURC Cause #44344 as Exhibit D in your own records for this example.

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Morton's proposal for calculation of value of distributed solar energy generation or EDG:

EDG ($/kwh) = Avoided Cost to Utility (ACU) + (Avoided Cost of Line Losses (ACLL) x Climate Change Factor (CCF) x Free Market Factor (FMF))

$$EDG = ACU + (ACLL \times CCF \times FMF)$$

The definitions are as follows:
Avoided Cost to Utility (ACU) – marginal cost calculated by Vectren to be $0.03631 per kwh

Avoided Cost of Line Losses (ACLL) – this is the benefit of on-site, point of use, distributed generation systems in which energy produced is consumed almost instantaneously without the need to transport electricity over several hundreds of miles of electrical lines. This result is a much higher efficiency of power generated vs. power consumed versus electricity generated from a centralized location. As a rule of thumb, electricity losses from a coal fired power plant can be as much as 50% from the time the energy reaches the point of use. Therefore, we calculate the value for ACLL to be 1.5.

Climate Change Factor (CCF) – the dire situation that our planet is currently encountering from the burning of fossil fuels cannot be denied. The science that exists to prove that the life-supporting ability of our planet is being destroyed is beyond argument. Yet, the fossil fuel and utility industries continue to fund propaganda campaigns to sow doubt and confuse the public. Although there is no price or dollar amount that could ever be paid for our planet, for the purposes of this formula, we are estimating this value to be 5.

Free Market Factor (FMF) – since Indiana's economy claims to be in a free-market capitalistic state, the requirement for a competitive business environment is mandatory. Without competition, you cannot have capitalism. Therefore, we estimate this value to be 2.

Therefore, our proposed value to Solar EDG to be as follows:

$$Solar\ EDG = ACU + (ACLL \times CCF \times FMF)$$

$$Solar\ EDG = 0.03631 + (1.5 \times 5 \times 2)$$

Solar EDG = $.18631 per KWH

Maximum system capacity = 20% of peak summer load of the electricity provider

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Conclusion – The EDG rate that Vectren has proposed has not taken into consideration all the benefits of solar energy, from both economic and environmental perspectives. The production of solar energy benefits ALL of us, not just the individual customer that chooses to install a system on their home. That individual system offsets the burning of coal to the benefit of all of mankind. As our planet rapidly heats beyond temperatures that even coal-fired power plants will be able to operate in, the proliferated deployment and use of solar energy systems to run our air conditioners may provide a few extra years of life for humanity to find a solution for long-term survival. Right now, there is no solution other than to find another planet.

The economic benefits of our proposed EDG to our 'free-market' economy are abundant. More jobs in the solar industry will be created vs. Vectren's proposed EDG resulting in job losses at a time in history when we can least afford to lose jobs due to a pandemic, and Vectren will continue to make a healthy profit regardless of whatever EDG is approved.

As the final authority over utilities in Indiana, it is the IURC's duty to protect the citizens of Indiana. It is only the IURC that can do this, and it is your responsibility, as mandated by Indiana State Law. As a Certified B Corporation, Morton Solar has always used our business as a force for good and will continue to do so. We hope you and your organization will make the same choice.

Thank you,

Brad D. Morton
President of Morton Solar
Senator Lugar Energy Patriot
Founding Board Member of Indiana Renewable Energy Association

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STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION
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INDIANAPOLIS, INDIANA 46204-3407

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December 15, 2009

Scott R. Albertson
Director of Regulatory Affairs
One Vectren Square
211 N.W. Riverside Drive
Evansville IN 47708

Dear Mr. Albertson:

The Electricity Division of the Indiana Utility Regulatory Commission recently received a customer inquiry from Brad Morton, an installer of wind turbines, regarding a proposed net metering installation at Haubstadt Elementary School in the South Gibson School Corporation. The inquiry involved a proposed wind turbine and the fact that the school receives three phase power service from Vectren. According to Mr. Morton, Vectren asserted that because the school receives service at three phase, the project did not fit into the applicability section in Vectren's Net Metering Rider, Rider NM ("Net Metering Tariff"). Vectren advised Mr. Morton that single phase service was necessary to supply the wind turbine which would require an underground bore at a cost of $12,000.

In response to this inquiry we reviewed Vectren's Net Metering Tariff and the Commission's net metering rule at IAC 170 4-4.2-4. The Commission's net metering rule states that: "[a]n investor-owned electric utility shall offer net metering to residential customers and K-12 schools that install a net metering facility." In contrast, the applicable section of Vectren's Net Metering Tariff states that: "[t]his Rider is applicable to Residential Customers, K-12 schools and Municipal Corporations electing service hereunder who have installed photovoltaic, wind, or hydroelectric generator systems on their premises and who are provided single-phase service."

Based on our review, it is apparent that the terms of Vectren's Net Metering Tariff do not comport with the terms of the Commission's net metering rule. Unlike Vectren's Net Metering Tariff, the Commission's rule does not contain any restriction on the type of electric service that would make a potential net metering customer ineligible, or require the customer to pay for the installation of single phase service. While we have not inspected the installation, Mr. Morton asserts that he performed a similar installation at a school with three phase service in Bloomington and did not encounter the issue presented by Vectren. We are also aware that other schools have net metering installations, and the issue of the type of service has not previously been brought to our attention.

In order to address the inconsistency between the terms of Vectren's Net Metering Tariff and the Commission's net metering rule, Vectren should make a thirty day filing with the Electricity Division to amend its Net Metering tariff as necessary to remove any conflicting terminology and requirements. We also suggest that Vectren work with the Haubstadt School and its agents to effectuate the proposed net metering installation. We understand that the school has received a grant from the Indiana Office of Energy Development for this project, and that the grant has a deadline for completion of the installation by May 31, 2010.

Thank you for your prompt attention to this matter. If you have any questions or need any additional information, please contact me at 317-232-2304.

Sincerely,

Bradley K. Borum

Dr. Bradley Borum
Director of Electricity
Indiana Utility Regulatory Commission

cc: Dr. Stacey Humbaugh
South Gibson School Corporation
Superintendent
1029W 650 S
Fort Branch, IN 47648

2011 Residential Bill Survey

Rate Jurisdictional Electric Utilities

July 1, 2011 Billing

Commission Staff presents a survey of electric utility billings for residential customers served under Indiana state rate-setting jurisdiction. The survey presents rates at a snapshot in time, namely July 1st of each year. The surveyed providers to these customers include 5 investor-owned, 4 co-operative and 13 municipal Utilities. We note that 63 municipal and 38 co-operative electricity providers within the state are excluded as non-jurisdictional.

We present the results in a variety of ways to improve the transparency of data collected. All rates included in this survey are those applicable on customer bills issued July 1. The initial tables show the July 1, 2011 bill applicable to simple tariff residential customers at 500, 1000, 1500, and 2000 kWh monthly consumption levels first alphabetically and then ranked by 1000 kWh cost, highest being 1st. Next we present the year over year change to the customer bills at 1000 kWh. The survey includes all rate trackers but excludes taxes. Expense and capital trackers provide a means to include cost changes in customer rates outside of a traditional rate case. The fuel and power cost tracker for each municipal in 2011 is compared to 2010 in Table 4. The investor-owned group employs a variety of tracking mechanisms for which the 2011 and 2010 charges are listed for comparison. Table 6 is included to disaggregate the base and variable cost components of 1000 kWh consumption. Figure Nos. 1 and 2 show the investor-owned electric utilities 1000 kWh residential customer bills for the current and historical periods, respectively.

Table/Figure List

Table 1

JURISDICTIONAL ELECTRIC UTILITY RESIDENTIAL CUSTOMER BILL SURVEY
[July 1, 2011 Billing] By Utility Name and Type

	kWh Consumption				
MUNICIPAL UTILITIES	**500**	**1000**	**1500**	**2000**	**Overall Ranking***
Anderson Municipal	$ 51.88	$ 93.92	$ 135.95	$ 175.78	13
Auburn Municipal	36.32	67.63	98.95	130.27	22
Columbia City Municipal	53.23	98.41	143.59	188.76	9
Crawfordsville Municipal	52.97	90.95	128.92	166.90	14
Frankfort Municipal	46.53	82.79	119.04	151.00	21
Kingsford Heights Municipal	49.16	94.82	140.48	186.13	11
Knightstown Municipal	49.43	94.25	134.77	175.29	12
Lebanon Municipal	47.48	88.18	125.09	161.99	18
Logansport Municipal	59.69	110.57	159.03	206.49	6
Mishawaka Municipal	47.22	84.45	121.68	158.90	20
Peru Municipal	51.34	96.10	139.25	182.41	10
Richmond Municipal	52.35	89.16	125.97	161.04	15
Tipton Municipal	47.16	88.32	127.19	166.06	17
COOPERATIVE UTILITIES					
Harrison County REMC	$ 69.51	$ 115.09	$ 156.75	$ 198.40	3
Jackson County REMC	65.51	113.02	160.53	208.04	5
Marshall County REMC	83.50	147.50	200.00	252.50	2
Northeastern REMC	66.25	114.06	161.86	204.16	4
INVESTOR OWNED UTILITIES					
Duke Energy Indiana	$ 62.81	$ 104.61	$ 141.53	$ 178.49	8
Indiana Michigan Power D/B/A AEP	45.72	84.65	123.57	162.50	19
Indianapolis Power & Light Co.	55.68	88.86	122.03	155.20	16
Northern Indiana Public Service Co.	58.56	110.37	162.17	213.98	7
So. Indiana Gas & Electric Co. D/B/A Vectren	83.05	155.10	227.15	299.20	1

*Overall Ranking based on Total Rate at 1000 kWh consumption.

Table 2

JURISDICTIONAL ELECTRIC UTILITY RESIDENTIAL CUSTOMER BILLS
[July 1, 2011 Billing]
Overall Ranking for 1,000 kWh of Consumption

		<---------kWh Consumption--------->			
	NAME	500 kWh	1000 kWh	1500 kWh	2000 kWh
1	So. Indiana Gas & Electric Co. D/B/A Vectren	$ 83.05	$ 155.10	$ 227.15	$ 299.20
2	Marshall County REMC	$ 83.50	$ 147.50	$ 200.00	$ 252.50
3	Harrison County REMC	$ 69.51	$ 115.09	$ 156.75	$ 198.40
4	Northeastern REMC	$ 66.25	$ 114.06	$ 161.86	$ 204.16
5	Jackson County REMC	$ 65.51	$ 113.02	$ 160.53	$ 208.04
6	Logansport Municipal	$ 59.69	$ 110.57	$ 159.03	$ 206.49
7	Northern Indiana Public Service Co.	$ 58.56	$ 110.37	$ 162.17	$ 213.98
8	Duke Energy Indiana	$ 62.81	$ 104.61	$ 141.53	$ 178.49
9	Columbia City Municipal	$ 53.23	$ 98.41	$ 143.59	$ 188.76
10	Peru Municipal	$ 51.34	$ 96.10	$ 139.25	$ 182.41
11	Kingsford Heights Municipal	$ 49.16	$ 94.82	$ 140.48	$ 186.13
12	Knightstown Municipal	$ 49.43	$ 94.25	$ 134.77	$ 175.29
13	Anderson Municipal	$ 51.88	$ 93.92	$ 135.95	$ 175.78
14	Crawfordsville Municipal	$ 52.97	$ 90.95	$ 128.92	$ 166.90
15	Richmond Municipal	$ 52.35	$ 89.16	$ 125.97	$ 161.04
16	Indianapolis Power & Light Co.	$ 55.68	$ 88.86	$ 122.03	$ 155.20
17	Tipton Municipal	$ 47.16	$ 88.32	$ 127.19	$ 166.06
18	Lebanon Municipal	$ 47.48	$ 88.18	$ 125.09	$ 161.99
19	Indiana Michigan Power D/B/A AEP	$ 45.72	$ 84.65	$ 123.57	$ 162.50
20	Mishawaka Municipal	$ 47.22	$ 84.45	$ 121.68	$ 158.90
21	Frankfort Municipal	$ 46.53	$ 82.79	$ 119.04	$ 151.00
22	Auburn Municipal	$ 36.32	$ 67.63	$ 98.95	$ 130.27
	Average	$ 56.15	$100.58	$143.43	$185.61
	2010 Survey	$ 51.83	$ 92.62	$ 131.78	$ 170.26
	% Change	8.34%	8.60%	8.84%	9.01%

Table 3

Jurisdictional Electric Utility Residential Customer Bill
1000 kWh Usage, July 1 Billing (By Name)
Year to Year Comparison

	MUNICIPAL UTILITIES	2011	2010	% Change
	Anderson Municipal	$ 93.92	$ 88.95	5.58%
	Auburn Municipal	$ 67.63	$ 58.59	15.44%
*	Columbia City Municipal	$ 98.41	$ 86.65	13.57%
*	Crawfordsville Municipal	$ 90.95	$ 81.29	11.89%
	Frankfort Municipal	$ 82.79	$ 77.97	6.18%
	Kingsford Heights Municipal	$ 94.82	$ 98.68	-3.91%
	Knightstown Municipal	$ 94.25	$ 85.43	10.32%
	Lebanon Municipal	$ 88.18	$ 84.52	4.33%
	Logansport Municipal	$ 110.57	$ 90.09	22.73%
	Mishawaka Municipal	$ 84.45	$ 83.18	1.52%
	Peru Municipal	$ 96.10	$ 86.89	10.61%
	Richmond Municipal	$ 89.16	$ 84.43	5.60%
	Tipton Municipal	$ 88.32	$ 82.78	6.69%
	Muni Averages	**90.73**	**83.80**	**8.27%**
	COOPERATIVE UTILITIES			
	Harrison County REMC	$ 115.09	$ 109.60	5.01%
*	Jackson County REMC	$ 113.02	$ 90.82	24.44%
	Marshall County REMC	$ 147.50	$ 133.10	10.82%
	Northeastern REMC	$ 114.06	$ 112.93	1.00%
	Co-op Averages	**122.42**	**111.61**	**9.68%**
	INVESTOR OWNED UTILITIES			
	Duke Energy Indiana	$ 104.61	$ 96.33	8.60%
	Indiana Michigan Power D/B/A AEP	$ 84.65	$ 81.45	3.93%
	Indianapolis Power & Light Co.	$ 88.86	$ 85.75	3.62%
	Northern Indiana Public Service Co.	$ 110.37	$ 105.55	4.56%
*	So. Indiana Gas & Electric Co. D/B/A Vectren	$ 155.10	$ 132.65	16.92%
	IOU Averages	**108.72**	**100.35**	**8.34%**

* Implemented new base rates in the past year.

Table 4

Jurisdictional Municipal Electric Utility Residential Customer Bill
1000 kWh Usage, July 1 Billing (By Name)
Year to Year Comparison
Fuel/Power Factor Adjustment Mechanism

	Fuel/Power Factor Charge @ 1000 kWh	2011	2010	Change
	Anderson Municipal	$25.64	$20.67	$4.97
	Auburn Municipal	24.05	15.00	9.05
*	Columbia City Municipal	4.70	25.94	(21.23)
*	Crawfordsville Municipal	(0.12)	16.58	(16.70)
	Frankfort Municipal	26.43	21.61	4.82
	Kingsford Heights Municipal	27.42	31.28	(3.86)
	Knightstown Municipal	29.24	20.42	8.82
	Lebanon Municipal	23.71	20.05	3.66
	Logansport Municipal	45.12	24.64	20.48
	Mishawaka Municipal	25.10	23.83	1.26
	Peru Municipal	21.59	12.37	9.22
	Richmond Municipal	24.53	19.80	4.73
	Tipton Municipal	22.68	17.14	5.54

* Implemented new base rates in the past year.

Table 5

Indiana Investor-Owned Electric Utilities
Year to Year Comparison
Adjustable Rate Mechanisms on Residential Bills
1000 kWh Usage, July 1 Billing

	2011	2010	Change
	$	$	$
Indiana Michigan Power D/B/A AEP			
FAC	4.38	3.76	0.61
DSM	2.57	0.51	2.06
Off-System Sales Sharing	1.18	0.00	1.18
RTO	0.75	1.85	(1.10)
QPCP & QPCP O&M	0.60	0.13	0.48
EA	0.88	0.90	(0.02)
Merger Savings (Settlement)	0.00	0.00	0.00
Total	10.35	7.15	3.20
Indianapolis Power & Light Co.			
FAC	14.62	10.76	3.86
Voluntary Credit applied via FAC	0.00	0.00	0.00
QPCP & QPCP O&M	6.57	6.81	(0.23)
DSM	0.89	1.35	(0.45)
ACLM	0.27	0.34	(0.07)
Total	22.36	19.25	3.10
Northern Indiana Public Service Co.			
FAC	7.84	3.49	4.35
QPCP	1.97	3.08	(1.11)
QPCP O&M	2.06	1.67	0.39
Customer Credit (Settlement)	(4.92)	(6.11)	1.19
Total	6.94	2.13	4.81
Duke Energy Indiana			
FAC	14.21	10.18	4.03
QPCP	4.16	3.96	0.20
QPCP O&M	3.91	4.19	(0.28)
EA	0.32	1.04	(0.72)
DSM	1.79	(0.65)	2.44
MISO	0.62	0.68	(0.06)
IGCC	4.55	2.01	2.54
Summer Relability	0.35	0.33	0.02
Amortization Phase Out	(0.50)	(0.61)	0.11
Total	29.41	21.13	8.28
* **So. Indiana Gas & Electric Co. D/B/A Vectren**			
FAC	0.06	8.46	(8.40)
QPCP	0.00	3.47	(3.47)
QPCP O&M	0.00	3.12	(3.12)
MISO	1.54	(0.43)	1.97
Reliability (RCRA)	(0.25)	(1.68)	1.43
DSM	1.16	0.28	0.88
BLGA	0.00	0.52	(0.52)
Total	2.51	13.75	(11.24)

FAC = Fuel Adjustment Charge
QPCP = Qualified Pollution Control Property
DSM = Demand Side Management
ACLM = Air Conditioning Load Management
QPCP O&M = Qualified Polltion Control Property Operation & Maintenance
EA = Emission Allowance
IGCC = Clean Coal Tracker for Gasification Plant
RTO = Midwest ISO or PJM ISO Non-fuel
BLGA = Blackfoot Landfill Gas Adjustment

* Implemented new base rates in the past year.

Table 6

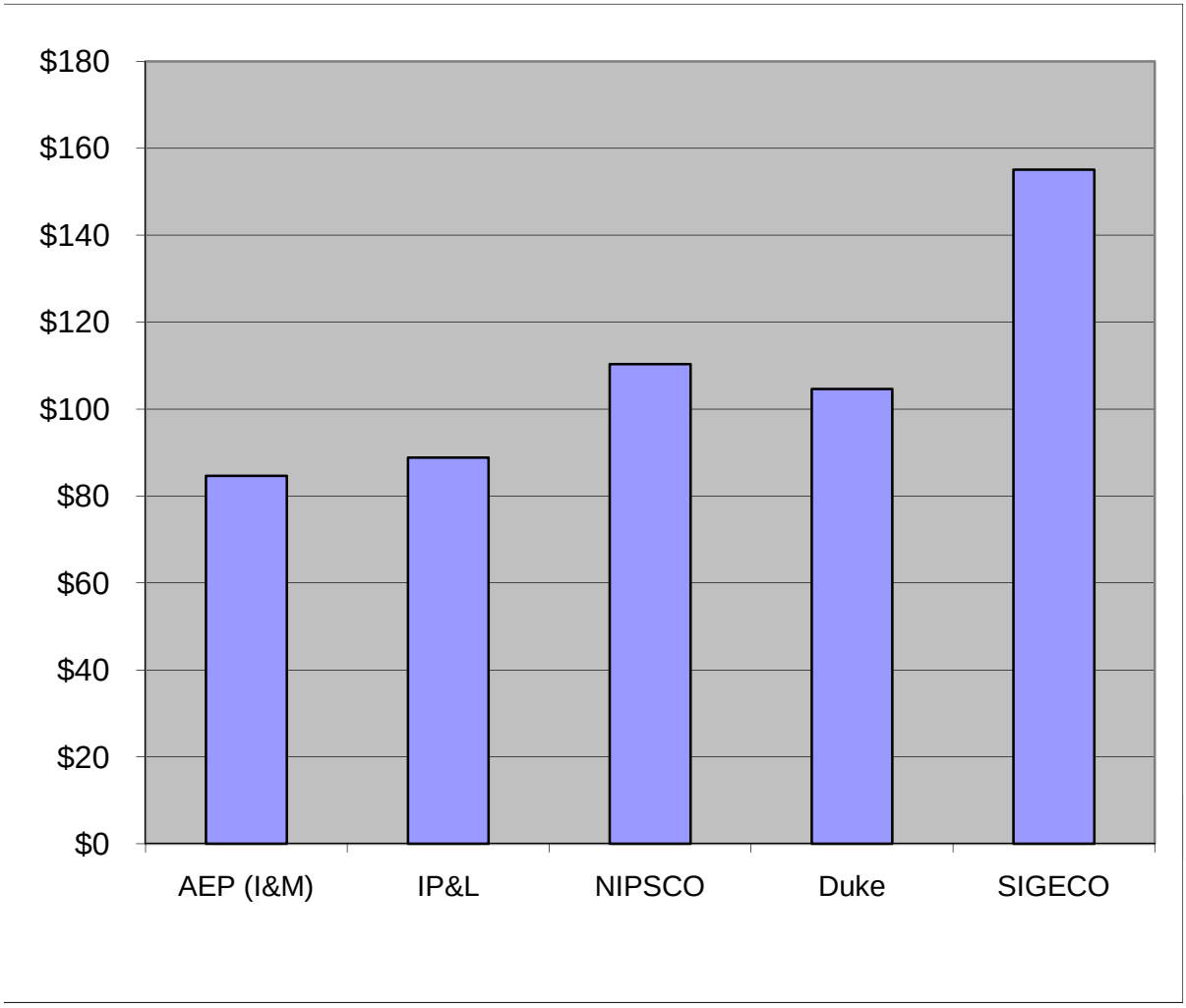
Indiana Investor-Owned Electric Utilities
Base and Variable (Tracker) Bill Components
1000 kWh Usage, July 1, 2011 Billing

	Base	Variable	Total	Base Rate Case Year
	$	$	$	
Indiana Michigan Power D/B/A AEP	74.30	10.35	84.65	2009
Indianapolis Power & Light Co.	66.50	22.36	88.86	1995
Northern Indiana Public Service Co.	98.50	11.86	110.37	1987
Duke Energy Indiana	74.70	29.91	104.61	2004
So. Indiana Gas & Electric Co. D/B/A Vectren	152.59	2.51	155.10	2011

Notes:
Northern Indiana Public Service Co. Base amount includes a $4.92 credit applied through the FAC
Duke Energy Indiana Base amount includes a $0.50 amortization removal credit

Figure 1

Comparison of Investor Owned Utilities
Residential Electric Bills at 1,000 kWh
July 1, 2011

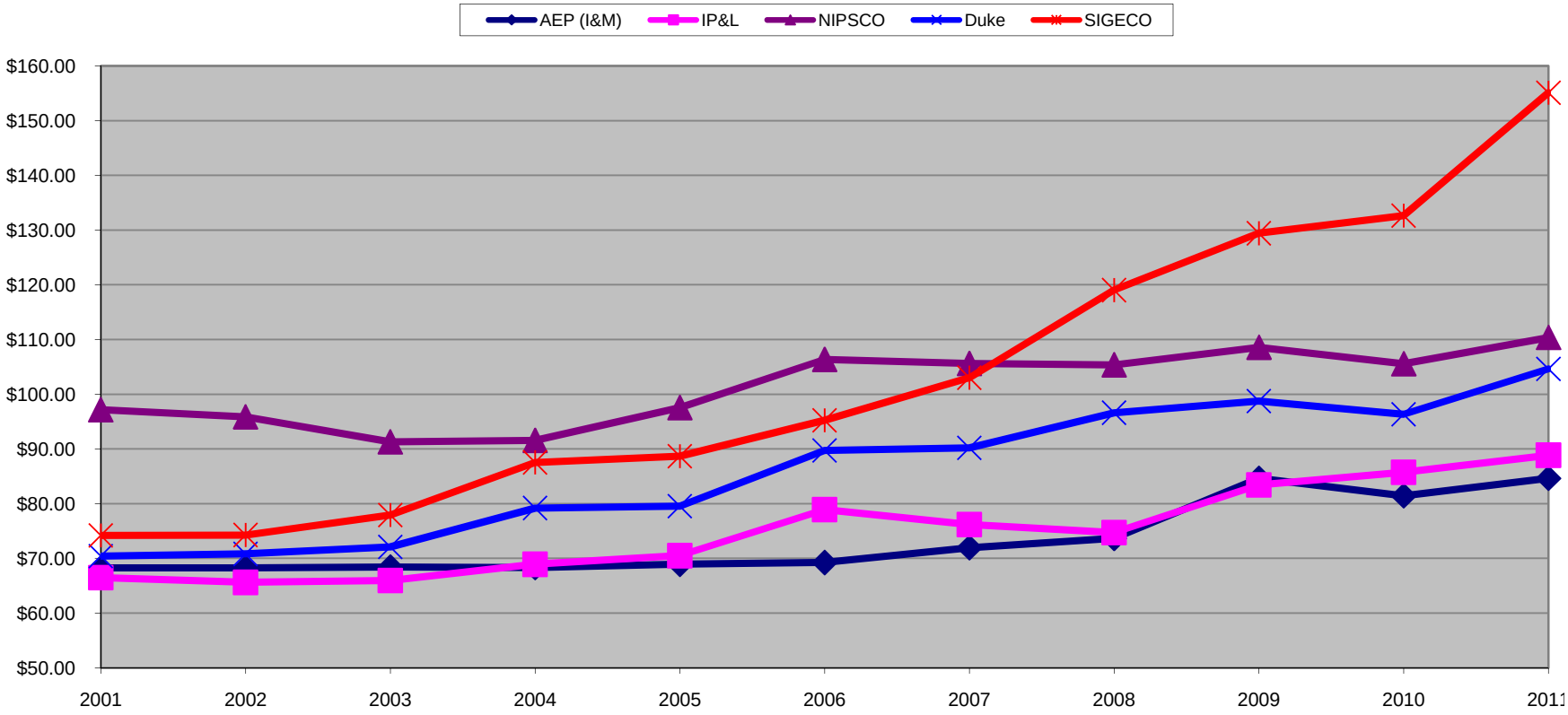


	1,000 kWh	Overall Ranking*
Indiana Michigan Power D/B/A AEP	$ 84.65	19
Indianapolis Power & Light Co.	$ 88.86	16
Northern Indiana Public Service Co.	$ 110.37	7
Duke Energy Indiana	$ 104.61	8
So. Indiana Gas & Electric Co. D/B/A Vectren	$ 155.10	1

*Overall Ranking based on evaluation of 22 utilities.

Figure 2

10 Year Comparison of Investor Owned Utility Residential Electric Bills at 1,000 kWh



Utility		Change			
		5 Years		10 Years	
American Electric Power Co. (I&M)	AEP (I&M)	$15.39	22.2%	$16.41	24.0%
Indianapolis Power & Light	IP&L	$9.95	12.6%	$22.36	33.6%
Northern Indiana Public Service Co.	NIPSCO	$4.02	3.8%	$13.21	13.6%
Duke Energy Indiana	Duke	$14.88	16.6%	$34.18	48.5%
Southern Indiana Gas & Electric Co.	SIGECO	$59.85	62.8%	$80.91	109.0%

2019 Residential Bill Survey

Rate Jurisdictional Electric Utilities

July 1, 2019 Billing

Commission Staff presents a survey of Indiana regulated electric utility billings for residential customers annually. The survey presents rates at a snapshot in time, namely July 1st of each year. The surveyed providers to these customers include 5 investor-owned and 8 municipal utilities[1].

We present the results in various ways to improve the transparency of the data collected. All rates included in this survey are approved by the Commission and applicable on customer bills issued July 1. The initial tables show alphabetically the July 1, 2019 bill applicable to simple tariff residential customers at 500, 1000, 1500, and 2000 kWh monthly consumption levels. The initial table also shows the ranking at 1000 kWh cost, highest being 1st. Next, we present the year over year change to the customer bills at 1000 kWh.

The survey includes all rate trackers, but excludes taxes. Expense and capital trackers provide a means to include cost changes in customer rates outside of a traditional rate case. The fuel and power cost tracker for each municipal in 2019 is compared to 2018 in Table 4. The investor-owned group employs a variety of tracking mechanisms for which the 2019 and 2018 charges are listed for comparison. Table 6 is included to disaggregate the base rate and tracker cost components of 1000 kWh consumption for each of the investor-owned electric utilities. Table 7 and Figure 1 present the electric utilities 1000 kWh residential customer bills for a 10-year historical period.

Table/Figure List

[1] We note that 68 municipal and 42 co-operative electricity providers within the state are excluded as non-jurisdictional.

Table 1

JURISDICTIONAL ELECTRIC UTILITY RESIDENTIAL CUSTOMER BILL SURVEY
[July 1, 2019 Billing] By Utility Name and Type

MUNICIPAL UTILITIES	kWh Consumption				Overall Ranking*
	500	1000	1500	2000	
Anderson Municipal	$ 65.95	$ 112.19	$ 158.42	$ 204.66	6
Auburn Municipal	$ 45.97	$ 84.93	$ 123.90	$ 162.87	13
Crawfordsville Municipal	$ 60.21	$ 105.42	$ 150.63	$ 195.84	8
Frankfort Municipal	$ 54.48	$ 100.97	$ 147.45	$ 193.94	11
Kingsford Heights Municipal	$ 53.08	$ 102.65	$ 152.23	$ 201.80	10
Lebanon Municipal	$ 58.38	$ 106.99	$ 151.80	$ 196.61	7
Richmond Municipal	$ 57.27	$ 98.99	$ 140.71	$ 180.71	12
Tipton Municipal	$ 54.85	$ 103.72	$ 150.29	$ 196.85	9
INVESTOR OWNED UTILITIES					
Duke Energy Indiana	$ 70.95	$ 121.76	$ 167.91	$ 214.01	4
Indiana Michigan Power D/B/A AEP	$ 71.51	$ 132.53	$ 193.54	$ 254.55	3
Indianapolis Power & Light Co.	$ 69.57	$ 114.30	$ 159.02	$ 203.74	5
Northern Indiana Public Service Co.	$ 75.18	$ 136.37	$ 197.55	$ 258.73	2
So. Indiana Gas & Electric Co. D/B/A Vectren	$ 81.64	$ 152.27	$ 222.91	$ 293.54	1

*Overall Ranking (highest to lowest) based on Total Rate at 1000 kWh consumption.

Table 2

JURISDICTIONAL ELECTRIC UTILITY RESIDENTIAL CUSTOMER BILLS
[July 1, 2019 Billing]
Overall Ranking for 1,000 kWh of Consumption

	NAME	500 kWh	<---------kWh Consumption---------> 1000 kWh	1500 kWh	2000 kWh
1	So. Indiana Gas & Electric Co. D/B/A Vectren	$ 81.64	$ 152.27	$ 222.91	$ 293.54
2	Northern Indiana Public Service Co.	$ 75.18	$ 136.37	$ 197.55	$ 258.73
3	Indiana Michigan Power D/B/A AEP	$ 71.51	$ 132.53	$ 193.54	$ 254.55
4	Duke Energy Indiana	$ 70.95	$ 121.76	$ 167.91	$ 214.01
5	Indianapolis Power & Light Co.	$ 69.57	$ 114.30	$ 159.02	$ 203.74
6	Anderson Municipal	$ 65.95	$ 112.19	$ 158.42	$ 204.66
7	Lebanon Municipal	$ 58.38	$ 106.99	$ 151.80	$ 196.61
8	Crawfordsville Municipal	$ 60.21	$ 105.42	$ 150.63	$ 195.84
9	Tipton Municipal	$ 54.85	$ 103.72	$ 150.29	$ 196.85
10	Kingsford Heights Municipal	$ 53.08	$ 102.65	$ 152.23	$ 201.80
11	Frankfort Municipal	$ 54.48	$ 100.97	$ 147.45	$ 193.94
12	Richmond Municipal	$ 57.27	$ 98.99	$ 140.71	$ 180.71
13	Auburn Municipal	$ 45.97	$ 84.93	$ 123.90	$ 162.87
	Average	$ 63.00	$113.31	$162.80	$212.14
	2018 Survey	$ 62.88	$114.68	$164.76	$214.40
	% Change	0.20%	-1.19%	-1.19%	-1.05%

Table 3

Jurisdictional Electric Utility Residential Customer Bill
1000 kWh Usage, July 1 Billing (By Name)
Year to Year Comparison

	MUNICIPAL UTILITIES		**2019**		**2018**	**% Change**
	Anderson Municipal	$	112.19	$	111.16	0.9%
	Auburn Municipal	$	84.93	$	84.83	0.1%
	Crawfordsville Municipal	$	105.42	$	106.16	-0.7%
	Frankfort Municipal	$	100.97	$	102.11	-1.1%
	Kingsford Heights Municipal	$	102.65	$	102.65	0.0%
	Lebanon Municipal	$	106.99	$	108.30	-1.2%
	Richmond Municipal	$	98.99	$	97.94	1.1%
	Tipton Municipal	$	103.72	$	99.33	4.4%
	Muni Averages	**$**	**101.98**	**$**	**101.56**	**0.4%**
	INVESTOR OWNED UTILITIES					
	Duke Energy Indiana	$	121.76	$	122.84	-0.9%
	Indiana Michigan Power D/B/A AEP	$	132.53	$	132.14	0.3%
*	Indianapolis Power & Light Co.	$	114.30	$	117.07	-2.4%
	Northern Indiana Public Service Co.	$	136.37	$	138.98	-1.9%
	So. Indiana Gas & Electric Co. D/B/A Vectren	$	152.27	$	152.59	-0.2%
	IOU Averages	**$**	**131.44**	**$**	**132.72**	**-1.0%**

* Implemented new base rates in the past year.

Table 4

Jurisdictional Municipal Electric Utility Residential Customer Bill
1000 kWh Usage, July 1 Billing (By Name)
Year to Year Comparison
Fuel/Power Factor Adjustment Mechanism

Fuel/Power Factor Charge @ 1000 kWh	2019	2018	Change
Anderson Municipal	$ 8.20	$ 7.18	102.7%
Auburn Municipal	$ 6.63	$ 6.52	10.8%
Crawfordsville Municipal	$ (4.46)	$ (3.72)	-74.2%
Frankfort Municipal	$ (6.05)	$ (4.91)	-114.5%
Kingsford Heights Municipal	$ 35.25	$ 35.25	0.0%
Lebanon Municipal	$ 6.52	$ 7.83	-131.0%
Richmond Municipal	$ 34.36	$ 33.31	104.5%
Tipton Municipal	$ 38.08	$ 33.69	439.2%

* Implemented new base rates in the past year.

Table 5

Indiana Investor-Owned Electric Utilities
Year to Year Comparison
Adjustable Rate Mechanisms on Residential Bills
1000 kWh Usage, July 1 Billing

	2019 $	2018 $	Change $
Indiana Michigan Power D/B/A AEP			
Off-System Sales Sharing / PJM Cost Rider	$20.14	$16.37	$3.77
Demand-Side Management / Energy Efficiency Program Cost Rider	$1.38	$3.01	($1.64)
Life Cycle Management Rider	$0.68	($2.73)	$3.41
Deprciation Credit	$0.00	$0.36	($0.36)
Phase-In Rate Adjustment	($0.12)	$0.00	($0.12)
Environmental Cost Rider	($0.23)	($0.76)	$0.53
Resource Adequacy Rider	($0.82)	$0.00	($0.82)
Fuel Cost Adjustment Rider	($3.58)	$0.79	($4.38)
Total	$17.45	$17.05	$0.40
* **Indianapolis Power & Light Co.**			
Demand Side Management	$4.21	$6.96	($2.75)
Capacity Adjustment	$0.73	($0.21)	$0.94
Regional Transmission Organization Adjustment	($0.03)	$1.64	($1.67)
Off System Sales Margin Sharing Adjustment	($0.63)	($0.72)	$0.09
Environmental Compliance Cost Recovery	($2.70)	$10.64	($13.34)
Fuel Adjustment Charge	($2.89)	$1.35	($4.24)
Total	($1.31)	$19.66	($20.97)
Northern Indiana Public Service Co.			
Demand Side Management Adjustment Mechanism Factor	$5.05	$2.27	$2.78
Transmission, Distribution and Storage System Improvement Charge	$3.81	$3.16	$0.65
Resource Adequacy Adjustment Factor	$3.65	$4.16	($0.51)
Environmental Cost Recovery Mechanism Factor	$2.75	$2.96	($0.22)
Federally Mandated Cost Adjustment Factor	$1.33	$0.25	$1.08
Resource Transmission Organization Adjustment Factor	$1.02	$2.14	($1.13)
Fuel Cost Adjustment	($2.00)	($3.28)	$1.28
Total	$15.60	$11.66	$3.94
Duke Energy Indiana			
Integrated Coal Gasification Combined Cycle Generating Facility Revenue Adjustment	$14.28	$14.81	($0.53)
Fuel Cost Adjustment	$14.14	$12.96	$1.18
Environmental Compliance Operating Cost Adjustment	$6.08	$7.52	($1.44)
Energy Efficiency Revenue Adjustment	$4.56	$4.63	($0.07)
Midcontinent ISO Management Cost and Revenue Adjustment	$3.80	$1.94	$1.86
Transmission and Distribution Infrastructure Improvement Cost Rate Adjustment	$3.67	$2.06	$1.61
Environmental Compliance Investment Adjustment	$3.14	$3.25	($0.11)
Reliability Adjustment	$0.58	$0.64	($0.06)
Renewable Energy Project Revenue Adjustment	$0.38	$0.36	$0.02
Federally Mandated Cost Rate Adjustment	$0.05	$0.15	($0.10)
Emission Allowance Adjustment	$0.00	($0.02)	$0.02
Credits to Remove Annual Amortization of Cinergy Merger Costs	($1.02)	($0.66)	($0.36)
Total	$49.66	$47.64	$2.02
So. Indiana Gas & Electric Co. D/B/A Vectren			
Demand Side Management Adjustment	$8.27	$7.98	$0.29
MISO Cost and Revenue Adjustment	$3.97	$3.51	$0.46
Environmental Cost Adjustment	$3.17	$0.00	$3.17
Clean Energy Cost Adjustment	$0.61	$0.00	$0.61
Reliability Cost and Revenue Adjustment	$0.06	$0.26	($0.20)
Transmission, Distribution and Storage System Improvement Charge	($2.58)	$1.29	($3.87)
Fuel Adjustment Clause	($7.48)	($5.73)	($1.75)
Total	$6.03	$7.31	($1.28)

* Implemented new base rates in the past year.

Table 6

Indiana Investor-Owned Electric Utilities
Base and Variable (Tracker) Bill Components
1000 kWh Usage, July 1, 2017 Billing

	Base	Variable	Total	Base Rate Case Year
Indiana Michigan Power D/B/A AEP	$ 115.08	$ 17.45	$ 132.53	2018
* Indianapolis Power & Light Co.	$ 115.60	$ (1.31)	$ 114.30	2018
Northern Indiana Public Service Co.	$ 120.76	$ 15.60	$ 136.37	2016
Duke Energy Indiana	$ 72.10	$ 49.66	$ 121.76	2004
So. Indiana Gas & Electric Co. D/B/A Vectren	$ 146.24	$ 6.03	$ 152.27	2011

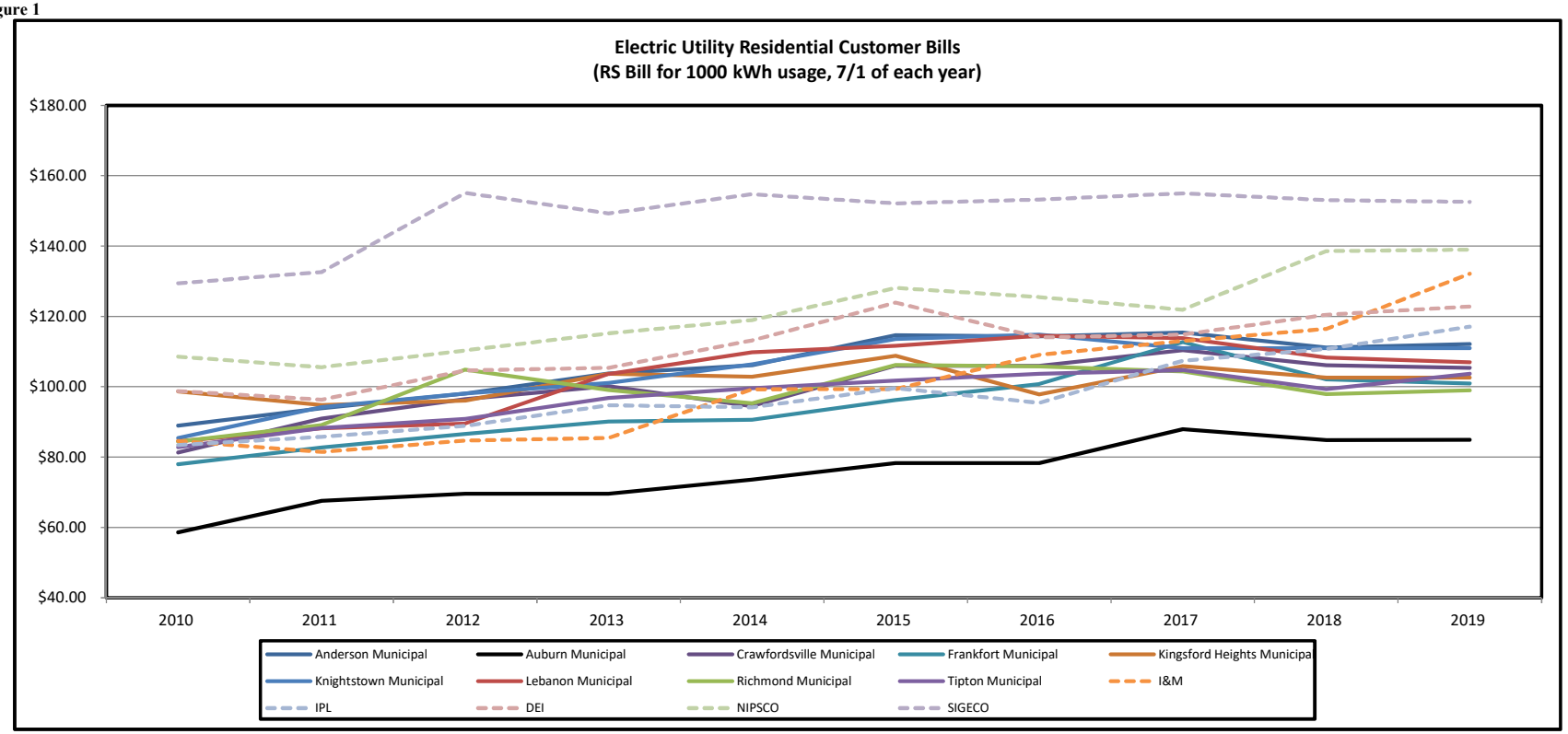
* Implemented new base rates in the past year.

Table 7

10-year Residential Bill Change
(RS Bill for 1000 kWh usage, 7/1 of each year)

	2010	2019	Change	%Change
Auburn Municipal	$ 58.59	$ 84.93	$ 26.34	45%
AEP (I&M)	$ 81.45	$ 132.53	$ 51.08	63%
Frankfort Municipal	$ 77.97	$ 100.97	$ 23.00	29%
Lebanon Municipal	$ 84.52	$ 106.99	$ 22.47	27%
SIGECO	$ 132.65	$ 152.27	$ 19.62	15%
Anderson Municipal	$ 88.95	$ 112.19	$ 23.24	26%
Knightstown Municipal	$ 85.43	$ 111.00	$ 25.57	30%
IP&L	$ 85.75	$ 114.30	$ 28.55	33%
Crawfordsville Municipal	$ 81.29	$ 105.42	$ 24.13	30%
Tipton Municipal	$ 82.78	$ 103.72	$ 20.94	25%
Duke	$ 96.33	$ 121.76	$ 25.43	26%
Kingsford Heights Municipal	$ 98.68	$ 102.65	$ 3.97	4%
NIPSCO	$ 105.55	$ 136.37	$ 30.82	29%
Richmond Municipal	$ 84.43	$ 98.99	$ 14.56	17%

Figure 1


Electric Utility Residential Customer Bills
(RS Bill for 1000 kWh usage, 7/1 of each year)
$180.00
$160.00
$140.00
$120.00
$100.00
$80.00
$60.00
$40.00
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Anderson Municipal
Auburn Municipal
Crawfordsville Municipal
Frankfort Municipal
Kingsford Heights Municipa
Knightstown Municipal
Lebanon Municipal
Richmond Municipal
Tipton Municipal
I&M
IPL
DEI
NIPSCO
SIGECO