

City/CUB Exhibit 2.2

Grading of Utility Companies' Rate Structures in Terms of Energy Efficiency and Regressiveness

Introduction

The objective of the analysis in this exhibit is to compare the rate design of companies serving the largest twenty metropolitan areas in the U.S., from the perspective of encouraging energy efficiency and in terms of regressiveness. ComEd's single family non-space rate design is used as the basis of comparison as this rate includes the effects of the SFV. In contrast, the SFV was not implemented for the multi-family class.

After explaining how the data was gathered and analyzed for ComEd and the comparison companies, the ComEd single family price is compared to each other company. The company by company comparison demonstrates ComEd's rate structure with partial SFV is the worst of the entire group of companies in terms of encouraging economic efficiency. The comparative analysis on a company by company basis also demonstrates that ComEd has the most regressive rate structure from the perspective of low income consumers. In summary, when ranking utilities in terms of encouraging energy efficiency, ComEd's delivery services rate design comes in dead last.

Computing the Shape of the Price Curve without Revenue Adjustments

To compare energy efficiency incentives and the regressiveness of rate designs for utility companies serving the largest metropolitan areas, the first step is to compute the price curve. The price curve is defined as the electric bill (including the customer charge and alternative revenue charges that may have an inverted rate structure) for different levels of monthly use. Once the electric bill is computed, the bill is divided by the kWh usage to establish the price per kWh.

For companies with a simple energy charge and customer charge such as ComEd, the calculation is straightforward. For other companies with inverted energy charges (none of the companies had declining block rates) the electric bill calculation was somewhat more complex as the different cut-off points for the different companies had to be accounted for. Many of the companies also had a summer/winter differential with different inversions in the summer from the winter. Further, some companies had more than two energy charge tiers.

Another complication arises for companies that do not have separate delivery, generation and transmission rates (most companies did have separate delivery charges). To compare delivery charges for companies that continue to operate as integrated utility companies, an assumption was made with respect to the generation and transmission charge. When making the assumption for generation prices, a rate per kWh without inversion and without an account charge was applied. The reason for making this assumption was that each company with (a) electric bills explained on their website and (b) both delivery charges and energy charges shows its generation and transmission charge as a flat energy charge. This means that the customer charge, as well as inversions in the energy charge, are attributed to the delivery side of the business.

To illustrate the calculation of raw electric bills, a few different cases are presented below that highlight how various issues were resolved to make focused comparisons concentrating on delivery service price structures.

Case 1: Simple Customer Charge and Energy Charge; No Inverted Rates; Delivery Tariffs Only

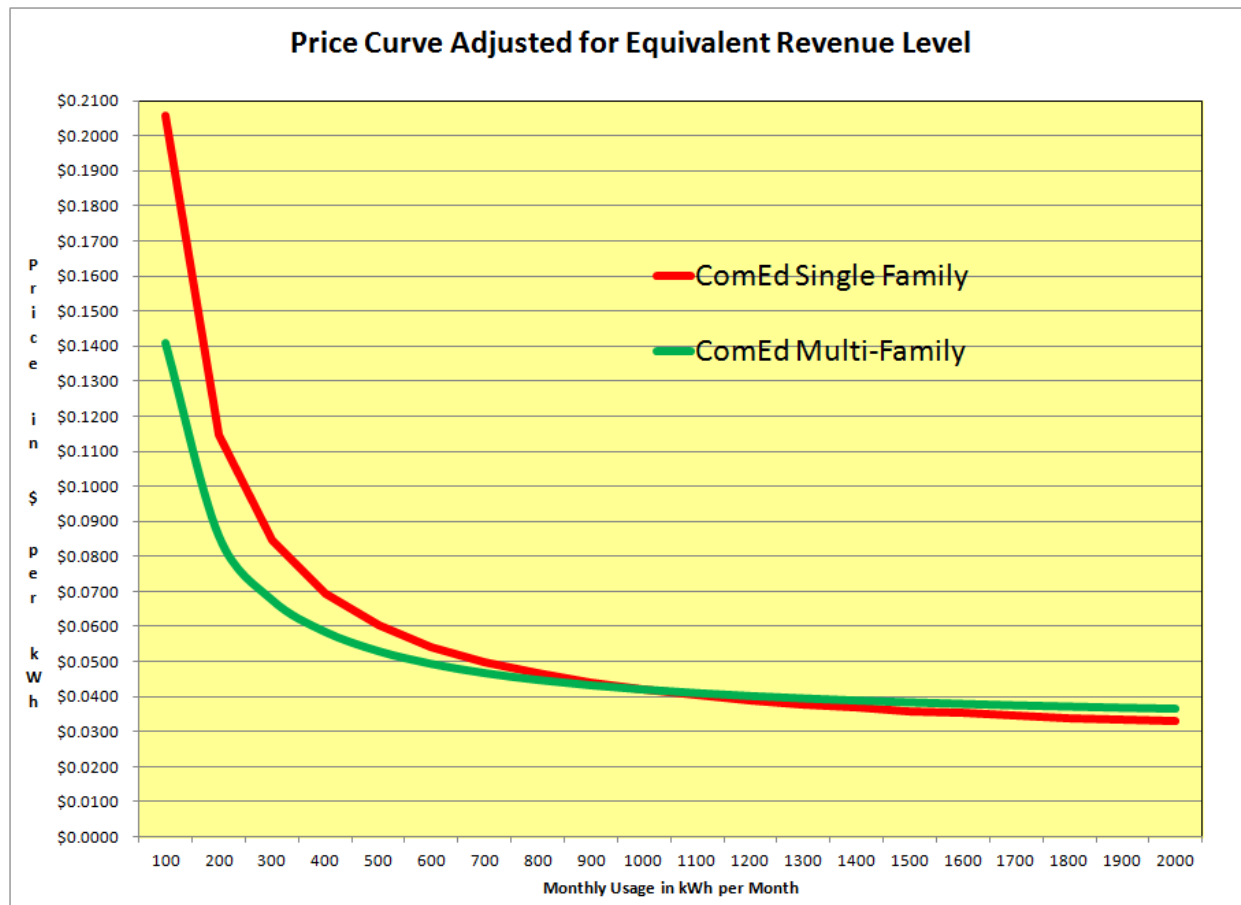
The first case is illustrated by the ComEd single-family and multi-family energy charges and account charges. The table below illustrates how the energy charge was multiplied by the monthly kWh usage increment (after dividing by 100 because the energy charge is stated in cents per kWh). The sum of the energy charge dollars and the customer charge is then divided by the kWh usage to arrive at a unit price. The price for the comparison company is then graphed against the ComEd price. The calculations of electric bills are illustrated on the table below.

	ComEd Single Family	ComEd Multi-Family
Customer	\$18.21	\$10.97
Initial Energy Charge (Cents per kWh)	2.38	3.10
kWh Increment		
Second Energy Charge (Cents/kWh)		
Second kWh Increment		
Third Energy Charge (Cents/kWh)		
Adjusted Customer Charge		
Relative Revenue Generation	1.00	

	Electric Bill at Nominal Rates	Price per kWh at Nominal Rates	Electric Bill at Nominal Rates	Price per kWh at Nominal Rates
kWh per Month				
100	\$20.59	\$0.21	\$14.07	\$0.14
200	\$22.97	\$0.11	\$17.17	\$0.09
300	\$25.35	\$0.08	\$20.27	\$0.07
400	\$27.73	\$0.07	\$23.37	\$0.06
500	\$30.11	\$0.06	\$26.47	\$0.05
600	\$32.49	\$0.05	\$29.57	\$0.05
700	\$34.87	\$0.05	\$32.67	\$0.05
800	\$37.25	\$0.05	\$35.77	\$0.04
900	\$39.63	\$0.04	\$38.87	\$0.04
1000	\$42.01	\$0.04	\$41.97	\$0.04
1100	\$44.39	\$0.04	\$45.07	\$0.04
1200	\$46.77	\$0.04	\$48.17	\$0.04
1300	\$49.15	\$0.04	\$51.27	\$0.04
1400	\$51.53	\$0.04	\$54.37	\$0.04
1500	\$53.91	\$0.04	\$57.47	\$0.04
1600	\$56.29	\$0.04	\$60.57	\$0.04
1700	\$58.67	\$0.03	\$63.67	\$0.04
1800	\$61.05	\$0.03	\$66.77	\$0.04
1900	\$63.43	\$0.03	\$69.87	\$0.04
2000	\$65.81	\$0.03	\$72.97	\$0.04
Total Revenue (Weighted Bill)	\$32.57		\$29.67	
Revenues as Percent of ComEd	1			

The total revenue shown at the bottom of the bills column is the sum of (a) the product of the electric bill at each increment and (2) the Wiebull distribution representing the percentage of bills in each usage increment, which is described below. As the Wiebull distribution sums to 1.0, the total revenue represents the weighted average electric bill produced by the rate structure. If a comparison company has a higher or lower bill the rate components are increased or decreased to produce the same total revenue.

To consider the structure of alternative rate designs, the alternative companies are compared to the ComEd single-family non-space design, as illustrated below in the case of the multi-family rate for ComEd. The single-family rate is used as the base of comparison because this structure includes partial SFV while the multi-family rate does not. The graph below illustrates that the single-family rate has a more regressive and anti-energy-efficiency slope than the multi-family rate design although they are quite similar.



Case 2: Customer Charge and Inverted Energy Charge; Delivery Tariffs Only

The second case is demonstrated by the Consolidated Edison (“ConEd”) low-income rate. This rate applies to delivery services and has an inverted energy charge, as shown by the ConEd explanation below. In order to create the price curve, the electric bill must account for the energy charge inversion.

SERVICE CLASSIFICATION NO. 1 - Continued
RESIDENTIAL AND RELIGIOUS

Rate I - Residential and Religious

Applicability: To all Customers other than those billed under Rate II.

Delivery Charges, applicable to all Customers

Customer Charge

\$15.76 per month

\$7.26 per month, effective April 1, 2012 - March 31, 2013, for Customers who are enrolled in the Company's low-income program. To qualify for the low-income program, a Customer must be enrolled in the Direct Vendor or Utility Guarantee Program and/or receiving benefits under Supplemental Security Income, Temporary Assistance to Needy Persons/Families, Safety Net Assistance, or Food Stamps, or have received a Home Energy Assistance Program grant in the preceding 12 months.

Energy Delivery Charges

Charges applicable for the months of June, July, August, and September

first 250 kWh

8.899 cents per kWh

over 250 kWh

10.224 cents per kWh

Charges applicable for all other months

All kWh

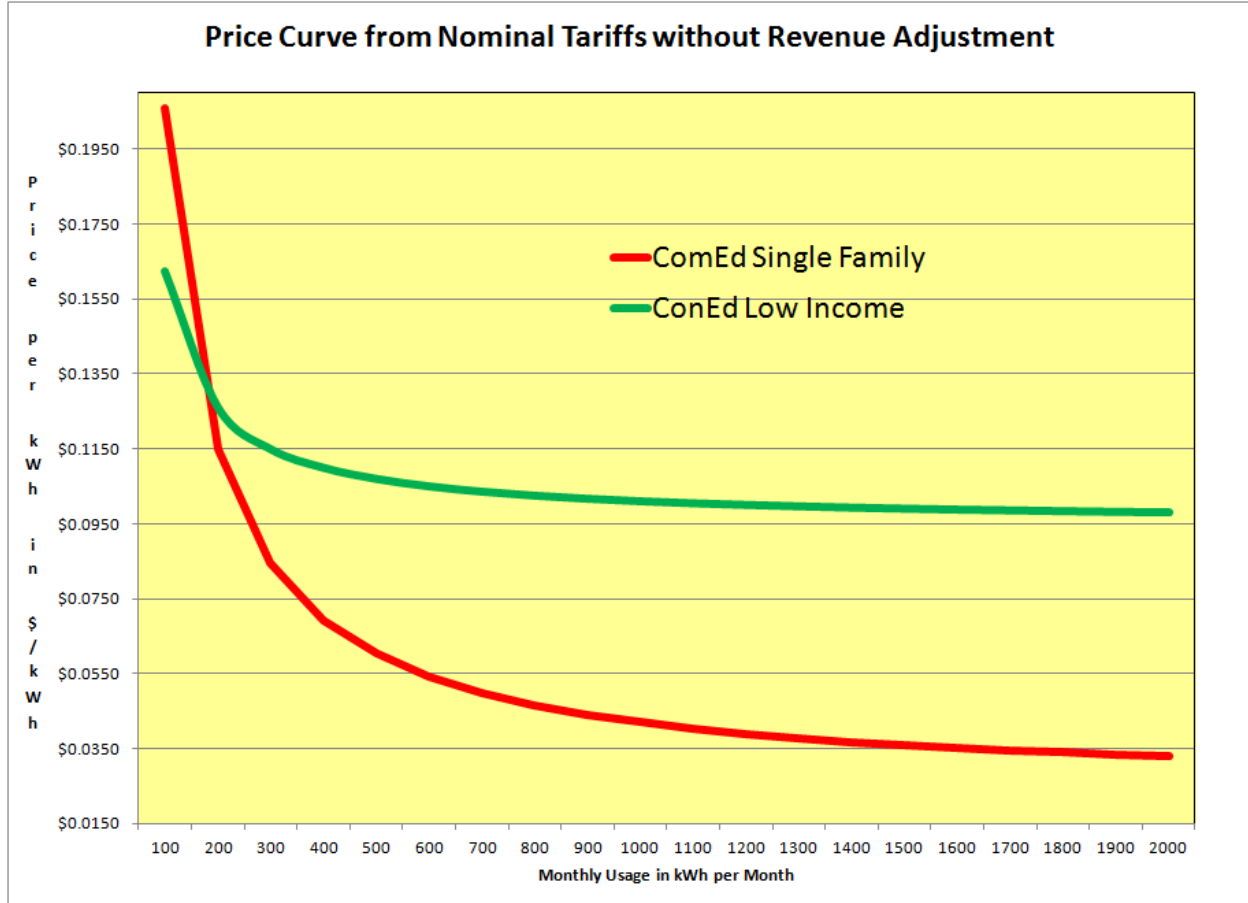
8.899 cents per kWh

The energy charge inversion is accounted for through weighting the summer inverted rate of 10.224 cents per kWh by 4/12 and the non-summer rate of 8.99 cents per kWh by 8/12, resulting in a weighted average rate of 9.401 cents per kWh. The bill for usage levels including kWh usage above the tier of 250 kWh per month are computed by first computing the charge for 250/kWh and adding that number to the difference between the kWh level and 250 multiplied by the net marginal energy rate. Computation of the price curve for the ConEd low-income rate design is shown on the table below.

	ConEd Low Income
Customer	\$7.26
Initial Energy Charge (Cents per kWh)	8.99
kWh Increment	250
Second Energy Charge (Cents/kWh)	9.50
Second kWh Increment	
Third Energy Charge (Cents/kWh)	
Adjusted Customer Charge	\$3.73
Relative Revenue Generation	1.95

kWh per Month	Switch for First Energy Tier	Electric Bill at Nominal Rates	Price per kWh at Nominal Rates	Adjusted Price for Equivalent Revenues
100	TRUE	\$16.25	0.1625	0.0835
200	TRUE	\$25.24	0.1262	0.0648
300	FALSE	\$34.49	0.1150	0.0591
400	FALSE	\$43.99	0.1100	0.0565
500	FALSE	\$53.50	0.1070	0.0550
600	FALSE	\$63.00	0.1050	0.0539
700	FALSE	\$72.50	0.1036	0.0532
800	FALSE	\$82.01	0.1025	0.0527
900	FALSE	\$91.51	0.1017	0.0522
1000	FALSE	\$101.02	0.1010	0.0519
1100	FALSE	\$110.52	0.1005	0.0516
1200	FALSE	\$120.02	0.1000	0.0514
1300	FALSE	\$129.53	0.0996	0.0512
1400	FALSE	\$139.03	0.0993	0.0510
1500	FALSE	\$148.54	0.0990	0.0509
1600	FALSE	\$158.04	0.0988	0.0507
1700	FALSE	\$167.55	0.0986	0.0506
1800	FALSE	\$177.05	0.0984	0.0505
1900	FALSE	\$186.55	0.0982	0.0504
2000	FALSE	\$196.06	0.0980	0.0504
Total Revenue (Weighted Bill)		\$63.40		
Revenues as Percent of ComEd		1.95		

The total revenue is again the weighted average of the bills at the various usage increments. Because of the higher energy charge, the ConEd low income rate produces revenues that are twice the ComEd single family level shown in the table above. The shape of the ConEd curve compared to the ComEd single family rate is shown below. This curve makes no adjustments for the fact that the ConEd rate design produces a higher level of revenues than the ComEd rates. Adjustments for the revenue level are shown in the next section below.



Case 3: Customer Charge and Multiple Tiered Energy Charges; Delivery Tariffs Only

A few of the companies had more complex tariff structures than the single inverted rate demonstrated in the example above for Consolidated Edison of New York. An example of such a structure is for LADWP, the municipal company serving Los Angeles. The excerpt from LADWP information below shows that the company has three tiers of energy charges and a minimum service charge applied for delivery charges.

Monthly rates effective July 1, 2013						
Residential R-1(A)	High Season June - Sep.			Low Season Oct. - May		
	Capped	Incremental	Total	Capped	Incremental	Total
Rate A - Standard Service						
Energy Charge - per kWh						
Zone 1						
Tier 1 - first 350 kWh	\$0.07020	\$0.00097	\$0.07117	\$0.07020	\$0.00097	\$0.07117
Tier 2 - next 700 kWh	\$0.08520	\$0.01397	\$0.09917	\$0.07020	\$0.02897	\$0.09917
Tier 3 - greater than 1050 kWh	\$0.12000	\$0.02087	\$0.14087	\$0.07020	\$0.02897	\$0.09917
Zone 2						
Tier 1 - first 500 kWh	\$0.07020	\$0.00097	\$0.07117	\$0.07020	\$0.00097	\$0.07117
Tier 2 - next 1000 kWh	\$0.08520	\$0.01397	\$0.09917	\$0.07020	\$0.02897	\$0.09917
Tier 3 - greater than 1500 kWh	\$0.12000	\$0.02087	\$0.14087	\$0.07020	\$0.02897	\$0.09917
Charges below are in addition to Energy Charges						
Elements Only in Capped Ordinance						
ECA - per kWh	\$0.05690	\$0.00000	\$0.05690	\$0.05690	\$0.00000	\$0.05690
ESA - per kWh	\$0.00147	\$0.00000	\$0.00147	\$0.00147	\$0.00000	\$0.00147
RCA - per kWh	\$0.00300	\$0.00000	\$0.00300	\$0.00300	\$0.00000	\$0.00300
Minimum Charge fixed charge per month (1)	\$10.00	\$0.00	\$10.00	\$10.00	\$0.00	\$10.00
Elements Only in Incremental Ordinance						
VEA - per kWh*	\$0.00000	-\$0.00253	-\$0.00253	\$0.00000	-\$0.00253	-\$0.00253
CRPSEA - per kWh*	\$0.00000	\$0.00169	\$0.00169	\$0.00000	\$0.00169	\$0.00169
VRPSEA - per kWh*	\$0.00000	\$0.00484	\$0.00484	\$0.00000	\$0.00484	\$0.00484
IRCA - per kWh	\$0.00000	\$0.00222	\$0.00222	\$0.00000	\$0.00222	\$0.00222

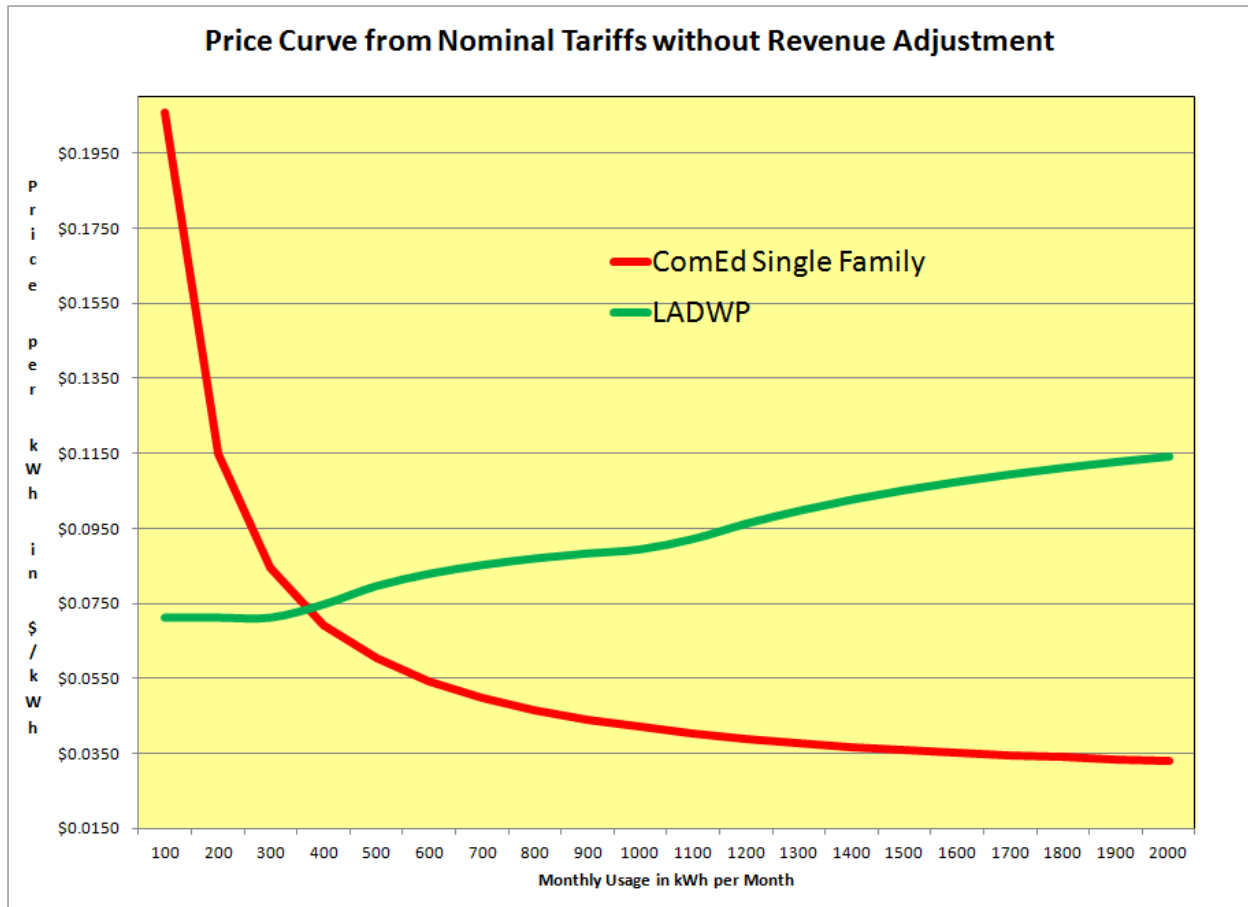
ECA- Energy Cost Adjustment
 ESA - Electric Subsidy Adjustment
 RCA - Reliability Cost Adjustment
 VEA - Variable Energy Adjustment
 CRPSEA - Capped Renewable Portfolio Standard Energy Adjustment
 VRPSEA - Variable Renewable Portfolio Standard Energy Adjustment

For this company, the energy charge adjustment is assumed to reflect generation costs and the minimum charge is not assumed to be a fixed customer charge. Computation of the total bill for rates with multiple tiers is illustrated below for the case of LADWP:

	LADWP
Customer	\$0.00
Initial Energy Charge (Cents per kWh)	7.12
kWh Increment	350
Second Energy Charge (Cents/kWh)	9.92
Second kWh Increment	700
Third Energy Charge (Cents/kWh)	14.09
Adjusted Customer Charge	-
Relative Revenue Generation	1.62

							Electric Bill at Nominal Rates	Price per kWh at Nominal Rates
kWh per Month	Part 1	Part 2	Part 3	Part 1	Part 2			
100	TRUE	FALSE	FALSE	\$7.12	\$0.00		\$7.12	\$0.07
200	TRUE	FALSE	FALSE	\$14.23	\$0.00		\$14.23	\$0.07
300	TRUE	FALSE	FALSE	\$21.35	\$0.00		\$21.35	\$0.07
400	FALSE	TRUE	FALSE	\$24.91	\$4.96		\$29.87	\$0.07
500	FALSE	TRUE	FALSE	\$24.91	\$14.88		\$39.79	\$0.08
600	FALSE	TRUE	FALSE	\$24.91	\$24.79		\$49.70	\$0.08
700	FALSE	TRUE	FALSE	\$24.91	\$34.71		\$59.62	\$0.09
800	FALSE	TRUE	FALSE	\$24.91	\$44.63		\$69.54	\$0.09
900	FALSE	TRUE	FALSE	\$24.91	\$54.54		\$79.45	\$0.09
1000	FALSE	TRUE	FALSE	\$24.91	\$64.46		\$89.37	\$0.09
1100	FALSE	FALSE	TRUE	\$24.91	\$69.42		\$101.37	\$0.09
1200	FALSE	FALSE	TRUE	\$24.91	\$69.42		\$115.46	\$0.10
1300	FALSE	FALSE	TRUE	\$24.91	\$69.42		\$129.55	\$0.10
1400	FALSE	FALSE	TRUE	\$24.91	\$69.42		\$143.63	\$0.10
1500	FALSE	FALSE	TRUE	\$24.91	\$69.42		\$157.72	\$0.11
1600	FALSE	FALSE	TRUE	\$24.91	\$69.42		\$171.81	\$0.11
1700	FALSE	FALSE	TRUE	\$24.91	\$69.42		\$185.89	\$0.11
1800	FALSE	FALSE	TRUE	\$24.91	\$69.42		\$199.98	\$0.11
1900	FALSE	FALSE	TRUE	\$24.91	\$69.42		\$214.07	\$0.11
2000	FALSE	FALSE	TRUE	\$24.91	\$69.42		\$228.16	\$0.11
Total Revenue (Weighted Bill)							\$52.69	
Revenues as Percent of ComEd							1.62	

Because LADWP has no customer charge and inverted rates, the slope of its revenue curve is upward in contrast to the ComEd regressive structure. This is illustrated on the graph below.



Case 4: Companies with Combined Delivery and Generation Tariffs

Most utility companies serving the largest metropolitan areas in the country have separate delivery service tariffs and serve markets where generation is no longer directly price regulated. However some metropolitan areas have integrated utility companies that provide distribution and generation. Further, some companies located in states that do not have deregulated tariffs present tariffs without fuel cost (*e.g.*, FPL). The table below shows the utility companies that have integrated prices and those that have separate delivery tariffs. In order to isolate the delivery pricing structure, assumptions were made about the amount of the tariff that was generation related.

Metropolitan Area and Population	Utility/Rate	Accounts Charge	Inverted Rates	Separated Delivery Tariff	First Energy Charge	1st kWh Tier	Second Energy Charge	2nd kWh Tier	Third Energy Charge
1) New York-Newark-Bridgeport, NY-NJ-CT-PA - 21,976,224	ConEd Non Low Income ConEd Low Income Public Service Electric and Gas	\$15.76 \$7.26 \$2.27	SUMMER SUMMER SUMMER	TRUE TRUE TRUE	8.99 8.99 3.56	250 250 600	9.50 9.50 3.73		
2) Los Angeles-Long Beach-Riverside, CA - 17,775,984	So Cal Edison LADWP	\$0.87 \$0.00	TRUE TRUE	TRUE TRUE	3.97 7.12	313 350	7.09 9.92	94 700	18.20 14.09
3) Chicago-Naperville-Michigan City, IL-IN-WI - 9,725,317	ComEd Single Family ComEd Multi-Family	\$18.21 \$10.97	FALSE FALSE	TRUE TRUE	2.38 3.10				
4) Washington-Baltimore-Northern Virginia, DC-MD-VA-WV - 8,211,213	PEPCO Washington DC PEPCO Maryland BG&E	\$5.10 \$6.78 \$7.50	TRUE FALSE FALSE	TRUE TRUE TRUE	0.74 2.52 3.19	400	2.14		
5) Boston-Worcester-Manchester, MA-RI-NH - 7,465,634	NSTAR	\$6.43	FALSE	TRUE	6.15				
6) San Jose-San Francisco-Oakland, CA - 7,228,948	PG&E Minimum Charge	\$4.44	TRUE	TRUE	5.35	387.35	7.156	116.21	27.23
7) Philadelphia-Camden-Vineland, PA-NJ-DE-MD - 6,382,714	PECO	\$7.09	FALSE	TRUE	6.10				
8) Dallas-Fort Worth, TX - 6,359,758	Texas Utilities	\$6.48		TRUE					
9) Houston-Baytown-Huntsville, TX - 5,641,077	Reliant Energy Clear Flex	\$9.45	FALSE	TRUE	3.47				
10) Atlanta-Sandy Springs-Gainesville, GA-AL - 5,478,667	Georgia Power	\$9.00	SUMMER	TRUE	5.33	650	6.00	350	6.05
11) Miami-Fort Lauderdale-Miami Beach, FL - 5,463,857	FPL	\$7.24	TRUE	TRUE	2.91	1000	3.94		
12) Detroit-Warren-Flint, MI - 5,410,014	DTE	\$6.00	FALSE	TRUE	5.00				
13) Phoenix-Mesa-Scottsdale, AZ - 4,039,182	APS	\$8.55	TRUE	FALSE	3.787	400	7.917	400	10.267
14) Seattle-Tacoma-Olympia, WA - 3,876,211	Puget Sound Energy	\$7.25	TRUE	FALSE	4.06	600	5.85		
15) Minneapolis-St. Paul-St. Cloud, MN-WI - 3,502,891	Excel MN Overhead	\$6.50	FALSE	FALSE	2.70				
16) Denver-Aurora-Boulder, CO - 2,927,911	Excel CO	\$6.75	TRUE	FALSE	1.10	500	4.03		
17) San Diego-Carlsbad-San Marcos, CA - 2,941,454	SDG&E	\$0.00	TRUE	TRUE	3.67	329.4	5.98	98.82	15.25
18) Cleveland-Akron-Elyria, OH - 2,917,801	First Energy	\$4.00	FALSE	TRUE	2.95				
19) St. Louis-St. Charles-Farmington, MO-IL - 2,858,549	Ameren Missouri	\$8.00	FALSE	FALSE	4.37				
20) Tampa-St. Petersburg-Clearwater, FL - 2,697,731	Tampa Electric	\$10.50	TRUE	TRUE	4.495	1000	5.595		

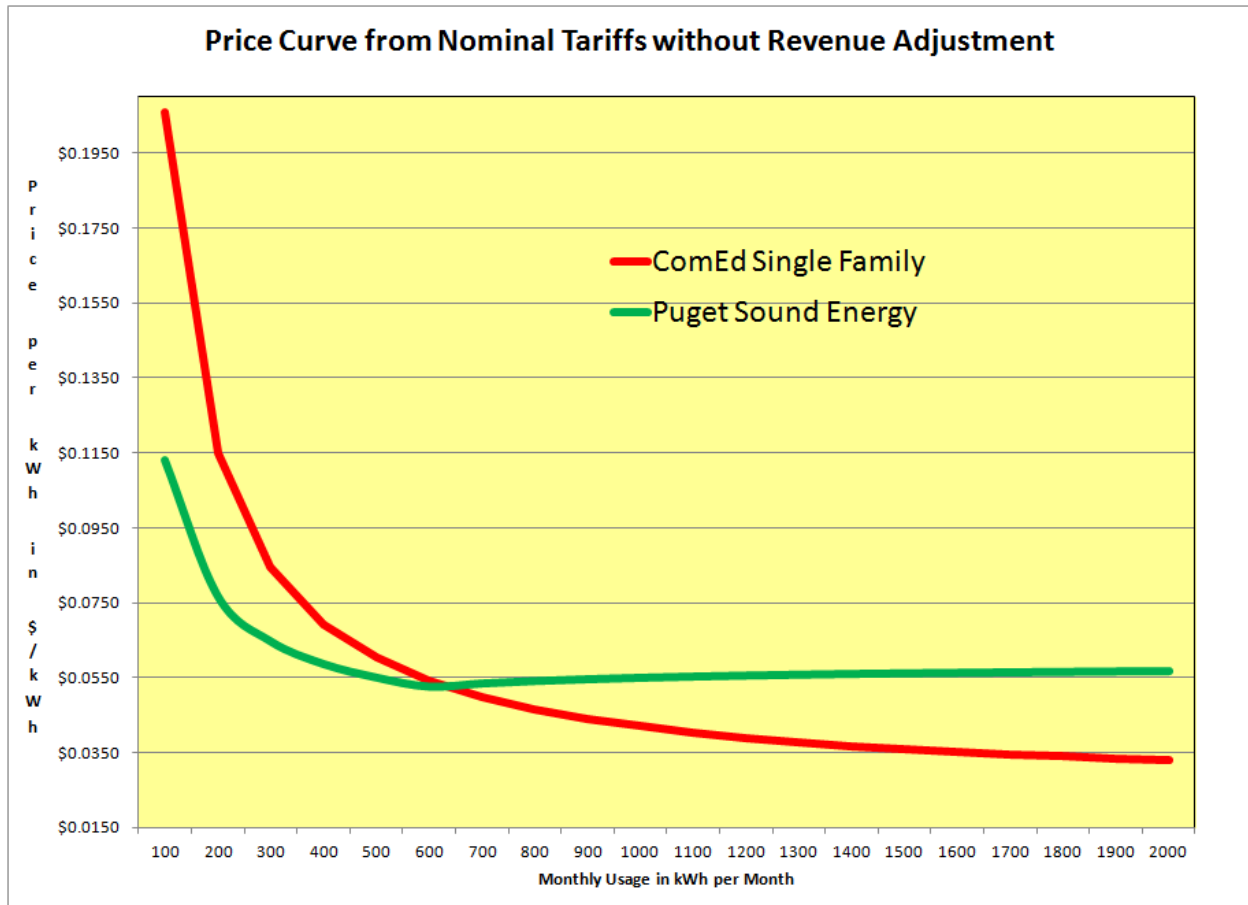
The case of Puget Sound Energy in Seattle is used to illustrate the approach. A sample bill from Puget Sound is shown in below:

Schedule 7 is referred to on customer bills as one of the following Rates:

07-NFC-E
27-NFC-E

BASIC CHARGE		\$ 7.25	
ENERGY CHARGE		1,000 kWh	
First	600 kWh @	\$ 0.085563	\$ 51.34
Remaining	400 kWh @	\$ 0.103548	\$ 41.42
POWER COST ADJUSTMENT		1,000 kWh @	\$ -
FEDERAL WIND POWER CREDIT		1,000 kWh @	\$ (0.000227)
ELECTRIC CONSERVATION PROGRAM CHARGE		1,000 kWh @	\$ 0.004338
MERGER CREDIT		1,000 kWh @	\$ (0.000332)
REGULATORY ASSET TRACKER		1,000 kWh @	\$ -
RENEWABLE ENERGY CREDIT		1,000 kWh @	\$ -
ENERGY EXCHANGE CREDIT		1,000 kWh @	\$ (0.006785)
Subtotal		\$	97.00
City Tax (if any)			
Total Bill		\$	97.00

For this company, it is assumed that generation and related charges are \$45/MWH and the remaining costs are related to delivery. (A different assumed generation cost would not alter the shape of its price curve, only its position against the vertical axis.) The resulting prices are 4.05 cents per kWh for the first block and 5.85 cents per kWh for the second block. All of the customer charge is assumed to be related to delivery services. The price curve for Puget Sound Energy relative to ComEd after making the adjustment for generation costs is shown below.



Adjusted Prices to Yield Rates that Produce Equivalent Revenues

As the objective of this analysis is to focus on the price relative to the usage and not the absolute level of prices, I have computed an adjusted set of rates to account for cost differences between areas. For example Consolidated Edison of New York has a relatively high account charge, but it also has a high energy charge. This means the overall level of ConEd

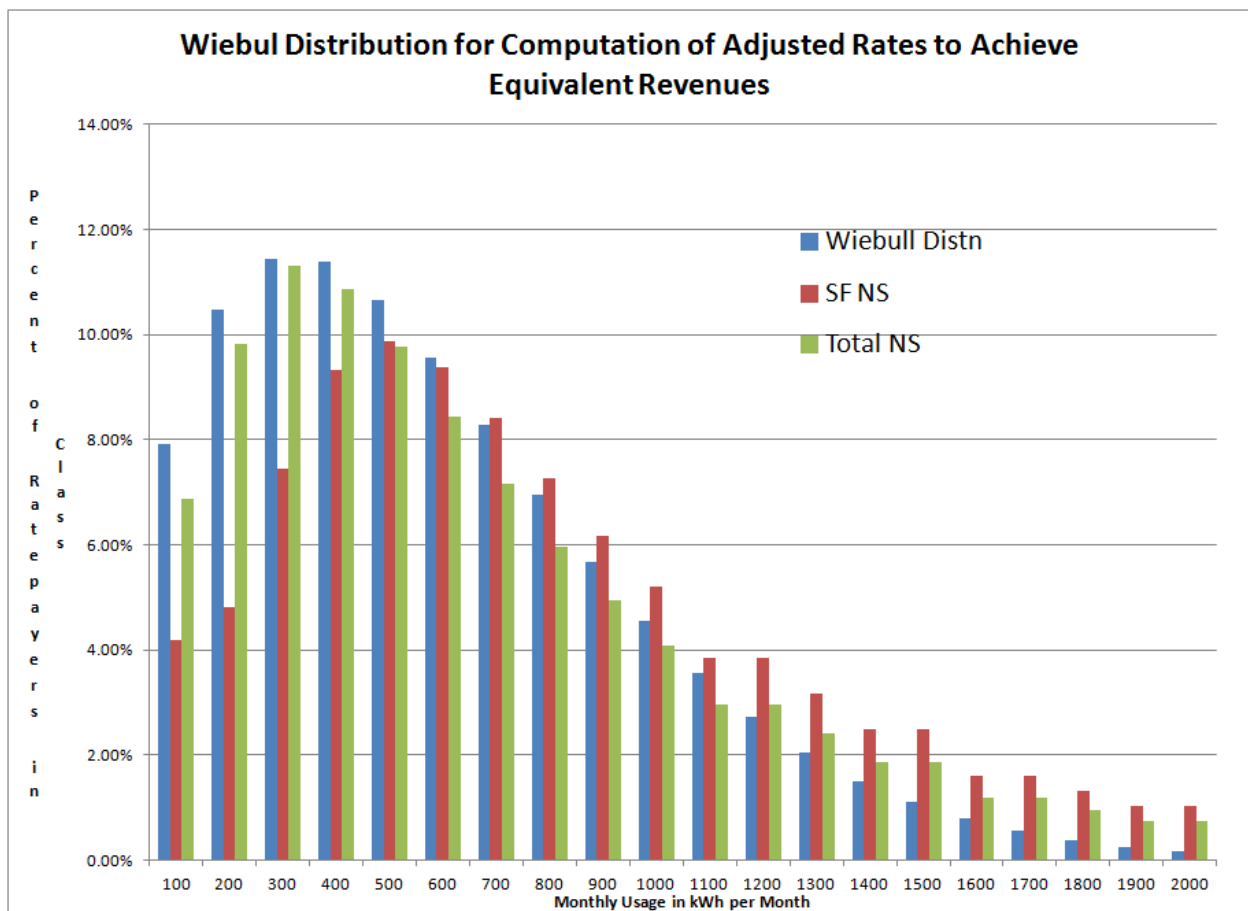
rates would produce a higher overall level of revenues than the ComEd rates and the curve for ConEd will be higher along the vertical axis than ConEd.

To adjust for the difference in revenue generation, I have first computed a weighted average bill for ComEd and the comparison utility by weighting the bill at each usage increment by an assumed distribution. This is the total revenue shown in the tables above at the bottom of the total bill column. Once the total revenue or weighted bill is computed, the ratio of that bill to the ComEd total weighted bill is calculated. For example in the case of PG&E shown in the table below, the total weighted bill is 77.04 which is 2.37 times the ComEd weighted bill. The electric bill for each increment is divided by that ratio (2.37 in the case of PG&E) arriving at a price curve adjusted for the different revenue levels. This is the rightmost column in the table below.

	PG&E Minimum Charge
Customer	\$0.00
Initial Energy Charge (Cents per kWh)	5.35
kWh Increment	387.35
Second Energy Charge (Cents/kWh)	7.16
Second kWh Increment	116.21
Third Energy Charge (Cents/kWh)	27.23
Adjusted Customer Charge	-
Relative Revenue Generation	

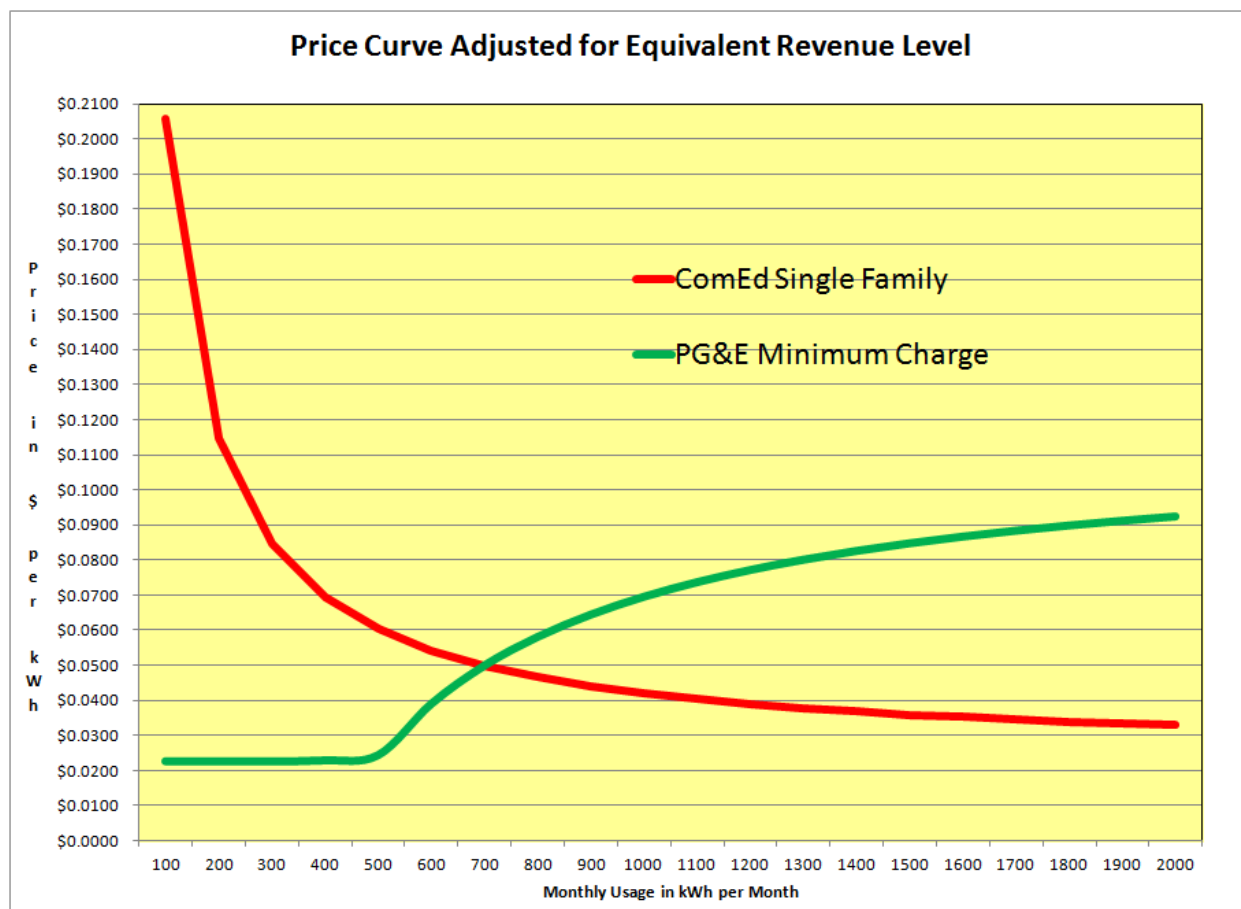
kWh per Month	Part 1	Part 2	Part 3	Part 1	Part 2	Electric Bill at Nominal Rates	Price per kWh at Nominal Rates	Adjusted Price for Equivalent Revenues
100	TRUE	FALSE	FALSE	\$5.35	\$0.00	\$5.35	\$0.05	0.0226
200	TRUE	FALSE	FALSE	\$10.69	\$0.00	\$10.69	\$0.05	0.0226
300	TRUE	FALSE	FALSE	\$16.04	\$0.00	\$16.04	\$0.05	0.0226
400	FALSE	TRUE	FALSE	\$20.71	\$0.91	\$21.61	\$0.05	0.0228
500	FALSE	TRUE	FALSE	\$20.71	\$8.06	\$28.77	\$0.06	0.0243
600	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$55.29	\$0.09	0.0390
700	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$82.52	\$0.12	0.0498
800	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$109.75	\$0.14	0.0580
900	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$136.98	\$0.15	0.0643
1000	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$164.21	\$0.16	0.0694
1100	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$191.44	\$0.17	0.0736
1200	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$218.67	\$0.18	0.0770
1300	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$245.90	\$0.19	0.0800
1400	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$273.13	\$0.20	0.0825
1500	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$300.36	\$0.20	0.0847
1600	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$327.59	\$0.20	0.0866
1700	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$354.82	\$0.21	0.0882
1800	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$382.05	\$0.21	0.0897
1900	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$409.28	\$0.22	0.0911
2000	FALSE	FALSE	TRUE	\$20.71	\$8.32	\$436.51	\$0.22	0.0923
Total Revenue (Weighted Bill)						\$77.04		
Revenues as Percent of ComEd						2.37		

The distribution used to compute the weighted average bill is shown below. The percent factors applied to each increment are modeled with a Wiebull distribution that has an alpha factor of 1.55 and a beta parameter of 600. The weighted bill is computed through multiplying the bill for each usage level by the percentage. After multiplying the bill by the percentage, the product is summed yielding the total revenue or the weighted bill that is the basis for adjusting the electric bills to yield the same level of revenues. Note that the usage data shown below is used only in the weighted average bill calculation. A somewhat different distribution has no effect on the nominal bill curve and would only have small effects on the adjusted bills.



The graph of the ComEd single family rate compared to the price that is adjusted to yield the same level of revenues allows one to directly compare the shape of ComEd's prices to those of other utility companies. To the extent that the ComEd prices are higher at low usage levels, energy efficiency is discouraged and the rate structure is regressive. The graphs show at what usage level the prices

become equivalent for ComEd and the comparison utility. For example, in the case of PG&E below, the ComEd prices are far above PG&E prices until a usage level of about 650 kWh per month. After that the ComEd prices are lower, encouraging more consumption.



Comparison Charts for Each Company

The remainder of this exhibit presents the revenue graphs for each company in the comparison sample. Graphs of nominal prices and the adjusted prices are presented for each utility. A test of the energy efficiency incentives and the regressiveness of rates can be made by evaluating the price curve adjusted for equivalent revenue for each company. In every single case, ComEd has a higher price level for low users and a lower price level for high users. It is on the basis of these price curve comparisons that ComEd can be graded as the worst company in the sample in terms of having rates that encourage energy efficiency.

The graphs are presented beginning with the highest population areas.

