

STATE OF NEW YORK  
PUBLIC SERVICE COMMISSION

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In the Matter of the Filing of Annual Reports Pursuant to  
Public Service Law § 66(6) by Electric and Gas  
Corporations Subject to Lightened Ratemaking Regulation  
Under the Wallkill Ruling and Order.

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Case 11-M-0294

**COMMENTS OF ASSEMBLYMEMBER JAMES F. BRENNAN**

**I. INTRODUCTION**

For nearly a century, since the founding of the Department of Public Service (“Department”), electric corporations - who generated electricity sold into competitive wholesale markets - filed an annual report (“Generators”).<sup>1</sup> The New York State Public Service Commission (“Commission”) presided over these Generators and enforced such reporting requirements. The annual report was a vital tool in maintaining transparency and oversight of the industry - providing critical information on the operations, accounts, capital, debt, and management of power producers.

In 1991 the Commission waived the annual reporting requirement for a small 95 megawatt cogeneration facility, known as the Wallkill decision.<sup>2</sup> Similar to the requirements of Public Service Law (“PSL”) Section 66(6), under federal law Generators must also file an annual report with the Federal Energy Regulatory Commission (“FERC”). The Commission ruled in Wallkill it was not necessary to require annual reporting, and therefore, permitted Generators to fulfill the PSL Section 66(6)

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<sup>1</sup> Public Service Law § 66(6) (N.Y. McKinney’s 2011) (“[The Commission shall:] Require every person and corporation under its supervision and it shall be the duty of every such person and corporation to file with the commission an annual report . . . .”)

<sup>2</sup> Case 91-E-0350, Wallkill Generating Company L.P., *Declaratory Ruling* (Issued August 21, 1991) (“Wallkill”).

requirements via its submission with FERC. Since this decision, the Commission has opened the door to a blanket exemption for the entire power producing industry, including multibillion dollar corporations such as Entergy. The Commission's decisions were imprudent with respect to the wholesale generator industry since the idea of viable electric competition was experimental and in its infancy. In addition, while acknowledging that an overly mechanistic interpretation of the laws might be inappropriate, a blanket exemption of the financial information such as is required in PSL Sections 66(6)(a)-(g), was unlawful.<sup>3</sup> Nonetheless Assemblymember Brennan supports the Commission's order requiring the filing of an annual report pursuant to PSL Sections 66(6)(a)-(g), with a balance sheet and income statement for New York State operations of wholesale generators.

Without annual reporting, New Yorkers do not have accessible information on the sales, revenue, costs, or price of electricity at power generating facilities. In the absence of maintaining and analyzing the critical market information neither the ratepayers nor the Commission can: 1.) ensure that the industry is providing consumers with the lowest possible prices within a restructured, competitive marketplace; 2.) determine the competitiveness of energy markets and improve the inefficiencies; or 3.) guard against market manipulation and opportunities for collusion.

Although the retail utilities still file with the PSC on their costs, revenues, and profits, the Generators no longer file. In spring of 2011 the Assembly Standing Committee on Corporations, Authorities and Commissions ("Committee") began examining the

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<sup>3</sup> Public Service Law § 23(1) (N.Y. McKinney's 2011) ("Every order of the commission shall take effect at a time therein specified and shall continue in force either for a period which may be designated therein or until changed or abrogated by the commission, *unless such order be unauthorized by this chapter or any other act or be in violation of a provision of the constitution of the state or of the United States.*") (emphasis added).

economic impact of closing the Entergy Corporation's Indian Point Energy Center, brought about by public concern for the safety of the operation of the two nuclear plants. The Committee learned that the Entergy Corporation no longer filed financial reports with the Commission despite the State law requiring such reports.

On June 3, 2011, the Commission issued a notice ("Notice") soliciting comments in the above-captioned case regarding the annual report filing requirements, which currently are required under PSL Section 66(6). Every Generator since Wallkill, who applied for an exemption to PSL Section 66(6), received a waiver from the PSC, and, therefore has not since filed an annual report. For example, the PSC exempted the Entergy Corporation from the requirement upon its purchase of Indian Point Two and Three ("IP 2 & 3") in 2000 and 2001. As a result, the Entergy Corporation does not provide public disclosure to New York of their costs, revenues, and profits. Assemblymembers Brennan, Cahill, and Sweeney requested this data of the Entergy Corporation through correspondence in the summer of 2011, but Entergy refused and refused again upon direct questioning at the hearing sponsored by the Assembly Standing Committee on Energy and the Committee on Corporations, Authorities, and Commissions on January 12, 2012.

The Commission not only has the legal duty to require all Generators to file an annual report pursuant to PLS Section 66(6), but it has a financial and public duty to demand, review, and publish such annual reports for all Generators. Failure to require Generators to fully report to the PSC would severely impair the ability of the markets and the public to adequately evaluate and price electric generation in New York State.

## **II. COMMENTS**

### **A.) Increased transparency and oversight will improve market efficiencies**

The New York electricity industry has evolved from a monopolistic industry characterized by vertically integrated electric utilities providing generation, transmission and distribution service to consumers to an industry where generating assets were divested from private transmission and distribution utilities. This process was called “electricity restructuring,” which aimed to increase the efficiency of the generation sector by letting independent entrepreneurs compete to supply power to the utility. It was hoped that reform would induce low-cost power producers to enter the market and that competition would reduce the price.

Under restructuring, Generators would no longer have a monopoly over local customers. In theory, distant (lower-cost) Generators could compete for business and rates would go down. Unfortunately, New York State has seen little price relief, and competition has had a negligible impact on price. The poor track record of restructuring stems from systemic problems inherent in the reform themselves. The electricity market suffers from four primary inefficiencies.

#### **1. Non-storability of Electricity**

If the good is storable, the buyers, or marketers in the middle, can store product to keep the seller from driving up the price. But electricity is extremely costly to store. The technologies for storage (for instance, hydroelectric pump storage or batteries) are quite inefficient. This leads to one source of inefficiency in electric markets.

## **2. Congestion, Transmission Restraints, and Loss-of-Load Requirements**

The wholesale market helped to equalize the marginal cost of production of utilities, subject to physical and institutional constraints on transmission access. Restraints within the electric transmission systems within New York City and Westchester County make it necessary for the generating facilities within the area to import a portion of its power requirements when the demand for capacity exceeds the capacity of local generation. It is also necessary when power plants in Zone J are disconnected from the electrical grid due to emergency situations or maintenance requirements. In addition, reliability requirements compel substantial portions of electric demand to be met from in-City Generators. There are thousands of megawatts of generation capacity provided by the Generators within the City, which cost much higher than the distant Generators from upstate. Therefore, the marginal-cost-market-clearing price is not based on the cheapest producers but on the expensive ones.

## **3. Inelasticity of Demand and Supply**

In the short run, electricity market demand is virtually completely inelastic. When there is a demand response to prices, consumers signal to the market the value they place on electricity. Unfortunately, the prices paid on the wholesale market for electricity did not serve their usual role of signaling to consumers the marginal costs of additional consumption, which vary by time of day and season. The customers are facing a fixed price which bears little short-term relationship to the wholesale price volatility of electricity. When the demand side of the market does not react to market prices, all pricing mechanisms are left in the hands of the market supply. In the presence of

competition, the producers will be unable to raise prices above their marginal costs. However, producers are able to set prices above the cost of the last unit when they have market power. Generating units have hard capacity constraints that imply marginal cost turns steeply upward at a certain output. The combination of very inelastic short-run demand and supply (at peak times) with the real-time nature of the market (costly storage and grid reliability requirements) makes electricity markets especially vulnerable to the exercise of market power. Put differently, the producer can ask for an extremely high price in order to deliver the product. The producer's ability to raise prices increases with lower demand responsiveness.

#### **4. Barriers to Entry**

Short-run exercise of market power will usually attract entry of new competitors. Even the threat of entry can discourage incumbents from pushing prices too high. Unfortunately, these effects might not be strong in the electricity industry. The reason is the economics of time discounting. With environmental and other licensing regulations, it would typically take three to five years to make the entry happen. Therefore, the producer's payoff to exercising market power can be extremely high.

Given the enormous size of this industry, even small amounts of market power imply large wealth transfers from consumers to producers. From the perspective of consumers, the deregulated electricity markets may in fact be more costly than were their regulated predecessors. Furthermore, the deadweight loss caused by the market failure would require regulatory agencies to implement the regulation to improve the efficiency.

The above discussion suggests that the notion of a competitive market in the Con Edison electric service market is highly problematic because of the unique characteristics of that market.

The Commission should take note, that efforts to address these “market failure” problems of transmission and reliability are underway in reviews by the Commission, the Independent System Operators, and the Governor’s Energy Superhighway RFP, to improve the transmission system and bring in lower cost power to the New York City and Westchester markets – where 47% of the State’s population lives and more than 50% of the State’s gross state product is produced.

#### **B.) Deregulation has been ineffective at lowering utility rates**

Based on the analysis provided in the attached Na Cheng Report (“Cheng Report”), the evidence overwhelmingly shows deregulation has been ineffective at lowering utility rates. The Cheng Report demonstrates that a particular producer, Entergy, earns profits vastly in excess of a retail utility’s standard rate of return and demonstrates a lack of competition in the electric markets. A complete analysis is provided in the attached Exhibit.

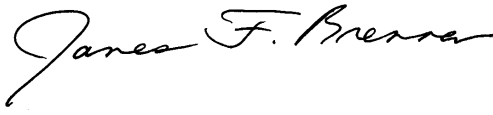
### **III. CONCLUSION**

The requirements for disclosure are essential and in the public interest, because of the law and the significance of financial information in monitoring competition and reliability. Furthermore, current competition in the New York City electric market is completely inadequate to protect consumers, as borne out by the Chang Report that

shows Entergy's and other Generators' excess profits and costs above what a regulated market would provide.

For the foregoing reasons, Assemblymember Brennan respectfully requests that the Commission follow the century-old law and require Generators to file complete annual reports pursuant to PSL Section 66(6).

Truly yours,

A handwritten signature in cursive script that reads "James F. Brennan". The signature is written in black ink and is positioned above a horizontal line.

Assemblyman James F. Brennan

Dated: July 30, 2012





# Deregulation of Electric Generation in New York State and Excess Profits for Power Producers: the Case of the Entergy Corporation and the Indian Point Energy Center

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September 17, 2012

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## ***Introduction***

In the spring of 2011 the Assembly Standing Committee on Corporations, Authorities and Commissions began examining the question of the economic impact of closing the Entergy Corporation's Indian Point Energy Center, brought about by public concern for the safety of the operation of the two nuclear plants there. The Committee learned that the Entergy Corporation no longer filed financial reports with the New York State Public Service Commission (PSC) despite a State law that required such reports. The PSC had exempted the Entergy Corporation from the requirement upon its purchase of Indian Point Two and Three in 2000 and 2001, as it had exempted other power producers since the onset of the deregulation of electric generation in the mid-1990s. The electric utilities had sold their generating plants to corporate purchasers who now operate in an unregulated wholesale marketplace, producing electricity that is sold either by bilateral contract or through a wholesale exchange. Although the retail utilities still file with the PSC on their costs, their revenues, and their profits, the power producers no longer file. As a result, the Entergy Corporation does not provide public disclosure to New York of their costs, revenues, and profits. Assemblymember Brennan, Cahill, and Sweeny requested this data of the Entergy Corporation through correspondence in the summer of 2011, but they refused to provide it both in response to the correspondence, and refused to again upon direct questioning at a hearing on Indian Point sponsored by the Assembly Standing Committee on Energy and the Committee on Corporations, Authorities, and Commissions on January 12, 2012.

This report examines the prices for electricity charged by the Entergy Corporation for the Indian Point nuclear plants 2 and 3, known as the Indian Point Energy Center, in 2010. The report provides reasonably accurate estimates of the costs of operation of the plants and the profits being earned by the Entergy Corporation and compares the costs and prices to what Entergy would be charging purchasers of electricity from Indian Point if New York State were still regulating the price of electric power generation.

## ***Background***

Since the late 1990s the New York electric utility industry has changed from an industry where customers paid electric bills at cost-based regulated rates to a partially deregulated industry in which the rates for the generation of electricity are no longer regulated by the State government.

In 1996 the administration of Governor George Pataki and the New York State Public Service Commission decided to deregulate. It required private transmission and distribution utilities, such as Con Edison and Central Hudson, to divest themselves of their capacity to generate electricity. This process was called "electricity restructuring." The New York Legislature never approved these decisions.

In 1999 a new entity, called the New York Independent System Operator (NYISO), was formed for the purpose of buying and selling electricity. Established by the businesses

that participate in the market, such as Con Edison, the NYISO operates an exchange for the daily buying and selling of electricity.

Entergy is a significant participant in this marketplace since it represents a large portion of the electricity provided to Con Edison and the New York Power Authority. In 2010 it sold 6,760,256 megawatt hours (MWh) of electricity to Con Edison from Indian Point, and it sold 817,785 MWh to Central Hudson from the James A. FitzPatrick Nuclear Power Plant, near Oswego, New York. Indian Point generated 16,320,636 MWh of electricity in 2010 and Entergy acknowledged at an Assembly hearing it sold remaining about 9.5 billion kilowatt hours to the wholesale electricity market operated by the Independent System Operator, which then sold the power to retailers. The 16.3 billion kilowatt hours produced at Indian Point represented about 10% of New York State consumption of electricity.

The NYISO runs a day-ahead and a real-time market for electricity and it also handles the scheduling of direct transactions between buyers and sellers (known as “bilateral transactions”). Roughly 98% of energy is scheduled in the day-ahead market, while the remaining 2% is accounted for in the real-time market. About half of the energy settled in the day-ahead market is scheduled through bilateral contracts and the other half is determined by the market-clearing-pricing auction system.

At that auction, utilities bid for the supply of power they will need in the day-ahead market. In the meantime, producers offer/bid a supply of power to meet the utilities’ demand at a particular price for the next day. When a match is made for the next day’s peak demand, the utilities must pay the suppliers the price offered. Then every producer on the system receives the price that a utility and a supplier matched (the market-clearing price) to meet peak demand. All suppliers producing electricity receive the market-clearing price offer of the most expensive resource chosen to meet supply.<sup>4</sup>

For example, a utility needs 30 megawatts of electricity. A generator is identified that offers to sell 10 megawatts for \$100, and the utility accepts. Next, a second generator is identified that offers an additional 10 megawatts for \$200, which the utility accepts. Then a third generator is identified to offer the remaining 10 megawatts for \$300, and the utility accepts again. In a normal auction, the utility would then pay each generator the agreed-upon prices, \$100, \$200, and \$300 respectively, for a total of \$600, and then resell it to customers. In the NYISO uniform-price auction, the utility pays each generator \$300 for a total cost of \$900, and then passes the full cost – including the 50% increase over the price of a normal auction – onto all of its customers.

In order to ensure that sufficient resources are available to meet projected load on a long-term basis, the NYISO administers a capacity market. In this market, suppliers such as Entergy offer capacity based on their generators’ proven ability to supply and buyers such as Con Edison procure capacity based on forecasted peak load plus reliability margins with locational requirements.

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<sup>4</sup> A fuller explanation for the auction scheme is contained in the McCullough report “*The NYISO’s Market-Clearing Price Auction Is Too Expensive for New York*,” March 3, 2009.

In addition, the NYISO operates financial markets such as Transmission Congestion Contracts (TCC) which are used to hedge transmission system congestion costs. In this market, participants buy (or sell) power at the day-ahead price and then sell (or buy) it back at the real-time price without having to actually produce or take delivery of the power. This virtual market allows participants to arbitrage the difference between day-ahead and real-time prices.

The flawed bidding system at the NYISO has resulted in enormous wholesale costs for retail purchasers, such as Con Edison, which in turn passes those costs on to consumers. It also makes the power plants that generate electricity, such as the units at Indian Point, hugely profitable.

This report uses publicly available data across federal, New York, and other states, reliable industry statistics, and standard utility rate analysis to estimate Entergy's Indian Point financial operations. It quantifies the excessive wholesale costs paid for electricity generated at Indian Point Units 2 and 3 (IP 2 and IP3)<sup>5</sup> and demonstrates the enormous profitability of the plants in 2010.

### ***Operating Revenues***

The Federal Energy Regulatory Commission (FERC) has exclusive jurisdiction over the sale of electricity by wholesale generators, which are required to file their records and information annually with FERC. These data are available to the public on the FERC website. The monthly energy transaction revenues of IP 2 and IP 3 are taken from the FERC's Electric Quarterly Report (EQR) database.<sup>6</sup>

The Energy Information Administration (EIA), which is the statistical agency within the U.S. Department of Energy, collects and disseminates independent and impartial energy information to the public. The Installed Capacity (ICAP) data for these units were taken from the EIA-860 annual electric generator report.<sup>7</sup> The capacity transaction rates come from the NYISO's ICAP auction data available on its website.<sup>8</sup>

The monthly operating revenues of IP 2 and IP 3 are exhibited in Tables 1 and 2 (see Appendix A). Table 3 (below) summarizes the total revenues of the plants.

Table 3. Summary of Total Revenues and Average Wholesale Prices

	Electricity Net Generation	Energy Transaction Revenues	ICAP Transaction Revenues	Total Revenues	Average Wholesale Prices
	(MWh)	(\$)	(\$)	(\$)	(cents/kWh)
Indian Point 2	7,325,923	388,273,919	160,648,952	548,922,871	7.49

<sup>5</sup> Indian Point Unit 1 was shutdown in October 1974 because its emergency core cooling system did not meet regulatory requirements.

<sup>6</sup> <http://www.ferc.gov/docs-filing/eqr/data/spreadsheet.asp>

<sup>7</sup> <http://www.eia.gov/cneaf/electricity/page/eia860.html>

<sup>8</sup> [http://www.nyiso.com/public/markets\\_operations/index.jsp](http://www.nyiso.com/public/markets_operations/index.jsp)

Indian Point 3	8,994,713	483,825,612	163,509,264	647,334,876	7.20
Aggregate	16,320,636	872,099,531	324,158,216	1,196,257,747	7.33

The annual revenues of IP 2 and IP 3 are \$549 million and \$647 million respectively. The aggregate operating revenues are \$1.2 billion. The average wholesale prices are 7.49 and 7.20 cents per kilowatt hour (kWh), which can be verified by the average charge that Con Edison paid in the same year. The annual report of Con Edison to the PSC shows that its average charge by Entergy is 7.76 cents per kWh.<sup>9</sup> These prices are comparable to the prices at which Entergy sells electricity in the wholesale market.

### ***Direct Production Costs***

Since Entergy has refused to make its financial data public, the direct production costs of the units at Indian Point are derived from two sources:

(1) The monthly generation and fuel consumption are taken from the EIA-923 database,<sup>10</sup> which is collected by the Energy Information Administration from electric power plants and combined heat and power plants in the United States. The data collected on this database include monthly electric power generation, fuel consumption, fossil fuel stocks, and so forth.

(2) The per unit production costs come from the Nuclear Energy Institute's (NEI) nuclear statistics report.<sup>11</sup> The average fuel cost at a nuclear power plant is 0.65 cents per kWh and the average non-fuel operating and maintenance costs (i.e., labor and supplies) are 1.49 cents per kWh. The average total production cost is 2.14 cents per kWh.

These data are reliable since they are comparable to the production expenses of Arkansas Nuclear One (ANO). The ANO is a regulated nuclear power plant in Russellville, Arkansas, which is owned by Entergy Arkansas and operated by Entergy Nuclear, both of which are subsidiaries of Entergy Corporation. Entergy Arkansas is required to send its annual financial report to Arkansas Public Service Commission (APSC). The 2010 annual report shows that the average total production cost at ANO was 1.98 cents per kWh, of which the fuel cost was .8 cents per kWh and the labor and supplies were 1.18 cents per kWh.

Moreover, the Entergy annual report states that production costs for all of its nuclear plants are 2.5 cents per kWh, whereas the price that Entergy Wholesale Commodities (EWC)<sup>12</sup> was paid for power generated by its nuclear plants in 2010 was 5.916 cents per kWh.<sup>13</sup>

<sup>9</sup> <http://documents.dps.state.ny.us/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=10-01660>

<sup>10</sup> [http://www.eia.gov/cneaf/electricity/page/eia906\\_920.html](http://www.eia.gov/cneaf/electricity/page/eia906_920.html)

<sup>11</sup> [http://www.nei.org/resourcesandstats/nuclear\\_statistics/](http://www.nei.org/resourcesandstats/nuclear_statistics/)

<sup>12</sup> In 2010, Entergy combined its non-utility generation into one organization called Entergy Wholesale Commodities or EWC. This business has six non-utility nuclear plants at five sites including the Indian Point units in New York.

<sup>13</sup> Data cited are from *Entergy Corporation and Subsidiaries 2010 Annual Report*, pages 22, 33.

The monthly estimated production costs of IP 2 and IP 3 are shown in Tables 4 and 5 (see Appendix B). Table 6 estimates the production costs at approximately 2.14 cents per kWh, broken down as follows:

Table 6. Summary of Production Costs

	Fuel Costs	Labor & Supplies Costs	Production Costs
Indian Point 2	47,618,500	109,156,253	156,774,752
Indian Point 3	58,465,635	134,021,224	192,486,858
Aggregate	\$106,084,134	\$243,177,476	\$349,261,610

The estimated production costs of IP 2 and IP 3 are \$157 million and \$192 million respectively. The aggregate production costs are \$349 million, of which fuel costs are \$106 million and labor and supplies costs are \$243 million. Mr. T. Michael Twomey, the Vice President for External Affairs for Entergy Wholesale Commodities, at the January 12, 2012 public hearing held by the State Assembly testified that the cost of full-time employee compensation at Indian Point Units 2 and 3 is approximately \$130 million, clearly within the range of these estimates.

### ***Other Expenses***

#### **Decommissioning Costs**

The Nuclear Regulatory Commission (NRC) requires plant owners to set aside a certain amount of money while the plant is still operating to pay for future shutdown costs, which are called decommissioning funds. The decommissioning deposit expenses for IP 2 and IP 3 are calculated from Entergy's annual reports to the NRC on its Decommissioning Funding Status (DFS).

#### **Property Taxes and Charity**

Written testimony submitted by Entergy at the January 12, 2012 public hearing states that Entergy contributes \$75 million in annual property tax payments and value sharing agreement payments (for Indian Point) to state and local governments and makes approximately \$2 million in annual charitable contributions.

#### **Insurance Expenses**

The insurance expenses are estimated from the annual report of Nuclear Electric Insurance Limited (NEIL) of which Entergy's nuclear owner/licensee subsidiaries are members.<sup>14</sup>

#### **Administrative Overhead**

<sup>14</sup> <http://www.nmlneil.com/members/default.aspx>

Table 7 below shows the breakdown of other expenses of the plants.

Table 7. Breakdown of Total Other Expenses

	Decomm.	Property Tax	Charity	Insurance	Total
Indian Point 2	32,510,000 <sup>15</sup>	37,500,000	1,000,000	2,300,000	73,310,000
Indian Point 3	42,680,000	37,500,000	1,000,000	2,300,000	83,480,000
Aggregate	\$75,190,000	\$75,000,000	\$2,000,000	\$4,600,000	\$156,790,000

Table 8 summarizes the total and the average costs of the plants.

Table 8. Summary of Average Production Costs

	Electricity Net Generation	Direct Production Costs	Other Expenses	Total Costs	Average Total Costs
	(MWh)	(\$)	(\$)	(\$)	(cents/kWh)
Indian Point 2	7,325,923	156,774,752	73,310,000	230,084,752	3.14
Indian Point 3	8,994,713	192,486,858	83,480,000	275,966,858	3.07
Aggregate	16,320,636	349,261,610	156,790,000	506,051,610	3.10

The total production costs of IP 2 and IP 3 are \$230 million and \$276 million respectively. The average total costs of the plants are 3.14 and 3.07 cents per kWh, which means that according to Table 3 the electricity produced at Indian Point sells for twice as much as it costs to produce it.

### ***Revenue Requirements, Rate Base, and Capital Costs***

Under traditional cost-based regulation, the utility that owns and operates the electric system is allowed to receive a sum of money in the rates that covers its operating costs and earns a reasonable profit on the investment in its facilities. That sum is called the utility's "revenue requirement". The value of its facilities upon which it earns its profit, or return on investment, is called the "rate base". The rate base is the capital cost of the facilities, based on their acquisition and/or construction cost, plus continued investment. The return is calculated as a percentage of the rate base.

### ***Capital Cost, Acquisition and Investment in Indian Point***

The original capital costs of the plants are taken from the NEI's U.S. Nuclear Plant Sales Table.<sup>16</sup> The acquisition prices of IP 2 and IP 3 are \$502 million and \$354 million respectively.<sup>17</sup> There is 10-year period of accumulated depreciation from 2000 to 2010. The net plant in service from the original purchase at the beginning of 2010 is approximately \$633 million. Furthermore, there has been an accumulated investment of

<sup>15</sup> Includes \$0.43 million provisional fund

<sup>16</sup> <http://www.nei.org/resourcesandstats/documentlibrary/>

<sup>17</sup> In March 2000, Entergy purchased Indian Point 3 and Fitzpatrick from the New York Power Authority's (NYPA) for \$636 million. In November 2000, Entergy purchased Indian Point 1 & 2 (unit 1 shut down) from Con Edison for \$502 million. In the case of Indian Point 3, the capital value is allocated on the basis of capacity.

approximately \$1 billion in upgrades to the Indian Point facility over the past 10 years.<sup>18</sup> Assuming that the \$1 billion was invested averagely during the 10 years, the net plant in service from the continued investment is \$857 million. Therefore, the rate base upon which its capital costs for interest and profits for a regulated entity would be \$1.49 billion.

The depreciation rate on average depreciable property (including utility and non-utility property) for Entergy was approximately 2.6% in 2010.<sup>19</sup>

### Interest Expense

Entergy's capitalization is balanced between equity and debt,<sup>20</sup> and thus a 50/50 capital structure is assumed.

The weighted-average interest rate of long-term debt for the Entergy Corporation on December 31, 2010 was approximately 6%.<sup>21</sup>

### Return on Equity

A standard utility return on equity is assumed to be 10%. This allows for a reasonable profit on the money shareholders have invested to finance construction and equipment.

By investigating the other subsidiaries of the Entergy Corporation in Arkansas, Louisiana, and Mississippi, which are regulated by their respective state Public Service Commissions, the authorized (after-tax) return on common equity of a regulated utility ranges from 9.45% to 13.05%.<sup>22</sup> Based on this benchmark, the assumed 10% return on equity is reasonable.<sup>23</sup>

### Income Tax

Income tax expenses include 35% federal income tax and 7.1% New York State income tax. For the accounting purposes, 37.49% as the composite tax rate is used to calculate the income tax expenses.<sup>24</sup>

The revenue requirements of the plants are derived in Table 9.

Table 9. Revenue Requirements

	Indian Point 2	Indian Point 3
Costs	\$230,084,752	\$275,966,858
Depreciation	\$20,799,480	\$17,951,960

<sup>18</sup> The data is from the written testimony of Entergy public hearing.

<sup>19</sup> See *Entergy Corporation and Subsidiaries 2010 Annual Report*

<sup>20</sup> In Entergy's 2010 annual report, "net debt to net capital" ratio is 52.1%.

<sup>21</sup> In Entergy's 2010 annual report, the average interest rate of mortgage bonds is 5.59%; the governmental bonds is 5.00%; the securitization bonds is 4.09%; and the Entergy corporation notes is 5.27%.

<sup>22</sup> In Entergy's 2010 annual report, the authorized return on common equity for Entergy Arkansas is 10.2%; Entergy Gulf States Louisiana is 9.9%-11.4% (electric); Entergy Louisiana is 9.45% - 11.05; and Entergy Mississippi is 10.79% - 13.05%.

<sup>23</sup> This has been verified by Con Ed.

<sup>24</sup> See *The New York City Master Electricity Plan*, prepared by Charles River Associates



Interest Expense	\$23,999,400	\$20,713,800
Return on Equity	\$39,999,000	\$34,523,000
Income Tax	\$23,989,162	\$20,704,964
Revenue Requirement	\$338,871,794	\$369,860,582

Table 10 below summarizes the revenue requirement for the Entergy Corporation's Indian Point Energy Center if it was a regulated entity based on its costs as a standard utility rate of return.

Table 10. Summary of Regulated Revenues and Average Prices

	Electricity Net Generation (MWh)	Regulated Revenues (Revenue Requirement) (\$)	Average Price (cents/kWh)
Indian Point 2	7,325,923	338,871,794	4.63
Indian Point 3	8,994,713	369,860,582	4.11
Aggregate	16,320,636	708,732,376	4.34

This shows that the aggregate regulated revenues would be \$708.7 million and the average price under cost-based regulation would be 4.34 cents per kWh.

### ***Excess Profits***

A comparison of the data shown in Tables 3 and 10 indicates that consumers pay approximately \$487.5 million more for the Entergy Corporation's Indian Point Units 2 and 3 than what they would pay for a standard utility. This means that operating revenues from the electricity sales at the two plants are 69% greater than they would have been under regulation. It also shows that consumers are being overcharged by 2.99 cents per kWh beyond what a regulated utility would charge.<sup>25</sup>

Table 11 together with the chart (see Appendix C) illustrates the monthly excess wholesale costs charged by the plants.

Table 12 shows an estimate of net income and after-tax return on equity of the plants under regulation and deregulation.

Table 12. Net Income, Profit Margin and Return on Equity under Deregulation and Regulation

	<b><i>Deregulated</i></b>		<b><i>Regulated</i></b>	
	Indian Point 2	Indian Point 3	Indian Point 2	Indian Point 3
Revenue	\$548,922,871	\$647,334,876	\$338,871,794	\$369,860,582
Total Costs	(\$230,084,752)	(\$275,966,858)	(\$230,084,752)	(\$275,966,858)

<sup>25</sup> It is noted that as part of the New York Power Authority's sale of Indian Point 3 and FitzPatrick to Entergy in 2000, they entered into two Value Sharing Agreements, providing for the Entergy Subsidiaries to pay the Authority a set price (0.695 cents per kWh for Indian Point unit 3 and 0.391 cents per kWh for FitzPatrick) for all MWhs metered from each plant through 2014, with the Authority being entitled to receive annual payments up to a maximum of \$72 million. See *New York Power Authority 2010 Financial Report*, page 59.

Depreciation	(\$20,799,480)	(\$17,951,960)	(\$20,799,480)	(\$17,951,960)
Interest Expense	(\$23,999,400)	(\$20,713,800)	(\$23,999,400)	(\$20,713,800)
Pre-Tax Net Income	\$274,039,239	\$332,702,258	\$63,988,162	\$55,227,964
Income Tax	(\$102,737,311)	(\$124,730,076)	(\$23,989,162)	(\$20,704,964)
Net Income	\$171,301,928	\$207,972,181	\$39,999,000	\$34,523,000
Profit Margin	31.21%	32.13%	11.80%	9.33%
Average Profit Margin	31.67%		10.57%	
Equity Capital	\$399,990,000	\$345,230,000	\$399,990,000	\$345,230,000
After-Tax ROE	42.83%	60.24%	10.00%	10.00%
Average After-Tax ROE	51.53%		10.00%	

This table shows an average profit margin of 31.67% for IP 2 and IP 3 under deregulation. This value is much higher than 10.57% which would be the value under regulation. It also shows an average after-tax return on equity of 51.53% for the plants under deregulation, specifically, a 42.83% return on equity for IP 2 and 60.24% for IP 3. Compared to the 10% return on equity under regulation, the after-tax return on equity would decrease by 32.83% and 50.24% for IP 2 and IP 3, respectively, under regulation.

## Appendix A

Table 1. Monthly Operating Revenues of Indian Point 2 in 2010

	Electricity Net Generation	Reported Energy Transaction Revenues	Reported ICAP Transaction Revenues	Total Operating Revenues
	(MWh)	(\$)	(\$)	(\$)
Jan-10	711,421	37,705,313	12,726,390	50,431,703
Feb-10	692,163	36,684,639	12,726,390	49,411,029
Mar-10	216,456	11,472,168	12,726,390	24,198,558
Apr-10	427,853	22,676,209	12,726,390	35,402,599
May-10	764,908	40,540,124	13,717,924	54,258,048
Jun-10	727,814	38,574,142	13,717,924	52,292,066
Jul-10	744,569	39,462,157	13,717,924	53,180,081
Aug-10	744,809	39,474,877	13,717,924	53,192,801
Sep-10	440,808	23,362,824	13,717,924	37,080,748
Oct-10	764,879	40,538,587	13,717,924	54,256,511
Nov-10	329,598	17,468,694	13,717,924	31,186,618
Dec-10	760,645	40,314,185	13,717,924	54,032,109
2010 Total	7,325,923	\$388,273,919	\$160,648,952	\$548,922,871

Table 2. Monthly Operating Revenues of Indian Point 3 in 2010

	Electricity Net Generation	Reported Energy Transaction Revenues	Reported ICAP Transaction Revenues	Total Operating Revenues
	(MWh)	(\$)	(\$)	(\$)
Jan-10	779,248	41,915,750	12,952,980	54,868,730
Feb-10	703,518	37,842,233	12,952,980	50,795,213
Mar-10	778,651	41,883,637	12,952,980	54,836,617
Apr-10	754,218	40,569,386	12,952,980	53,522,366
May-10	778,262	41,862,713	13,962,168	55,824,881
Jun-10	748,057	40,237,986	13,962,168	54,200,154
Jul-10	766,910	41,252,089	13,962,168	55,214,257
Aug-10	767,961	41,308,622	13,962,168	55,270,790
Sep-10	609,027	32,759,562	13,962,168	46,721,730
Oct-10	776,717	41,779,607	13,962,168	55,741,775
Nov-10	754,142	40,565,298	13,962,168	54,527,466
Dec-10	778,002	41,848,728	13,962,168	55,810,896
2010 Total	8,994,713	\$483,825,612	\$163,509,264	\$647,334,876

Data Sources:

1. FERC, EQR database
2. NYISO, ICAP market exchange data

## Appendix B

Table 4. Monthly Direct Production Costs of Indian Point 2 in 2010

	Electricity Net Generation	Fuel Costs	Labor and Supplies Costs	Direct Production Costs
	(MWh)	(\$)	(\$)	(\$)
Jan-10	711,421	4,624,237	10,600,173	15,224,409
Feb-10	692,163	4,499,060	10,313,229	14,812,288
Mar-10	216,456	1,406,964	3,225,194	4,632,158
Apr-10	427,853	2,781,045	6,375,010	9,156,054
May-10	764,908	4,971,902	11,397,129	16,369,031
Jun-10	727,814	4,730,791	10,844,429	15,575,220
Jul-10	744,569	4,839,699	11,094,078	15,933,777
Aug-10	744,809	4,841,259	11,097,654	15,938,913
Sep-10	440,808	2,865,252	6,568,039	9,433,291
Oct-10	764,879	4,971,714	11,396,697	16,368,411
Nov-10	329,598	2,142,387	4,911,010	7,053,397
Dec-10	760,645	4,944,193	11,333,611	16,277,803
2010 Total	7,325,923	\$47,618,500	\$109,156,253	\$156,774,752

Table 5. Monthly Direct Production Costs of Indian Point 3 in 2010

	Electricity Net Generation	Fuel Costs	Labor and Supplies Costs	Direct Production Costs
	(MWh)	(\$)	(\$)	(\$)
Jan-10	779,248	5,065,112	11,610,795	16,675,907
Feb-10	703,518	4,572,867	10,482,418	15,055,285
Mar-10	778,651	5,061,232	11,601,900	16,663,131
Apr-10	754,218	4,902,417	11,237,848	16,140,265
May-10	778,262	5,058,703	11,596,104	16,654,807
Jun-10	748,057	4,862,371	11,146,049	16,008,420
Jul-10	766,910	4,984,915	11,426,959	16,411,874
Aug-10	767,961	4,991,747	11,442,619	16,434,365
Sep-10	609,027	3,958,676	9,074,502	13,033,178
Oct-10	776,717	5,048,661	11,573,083	16,621,744
Nov-10	754,142	4,901,923	11,236,716	16,138,639
Dec-10	778,002	5,057,013	11,592,230	16,649,243
2010 Total	8,994,713	\$58,465,635	\$134,021,224	\$192,486,858

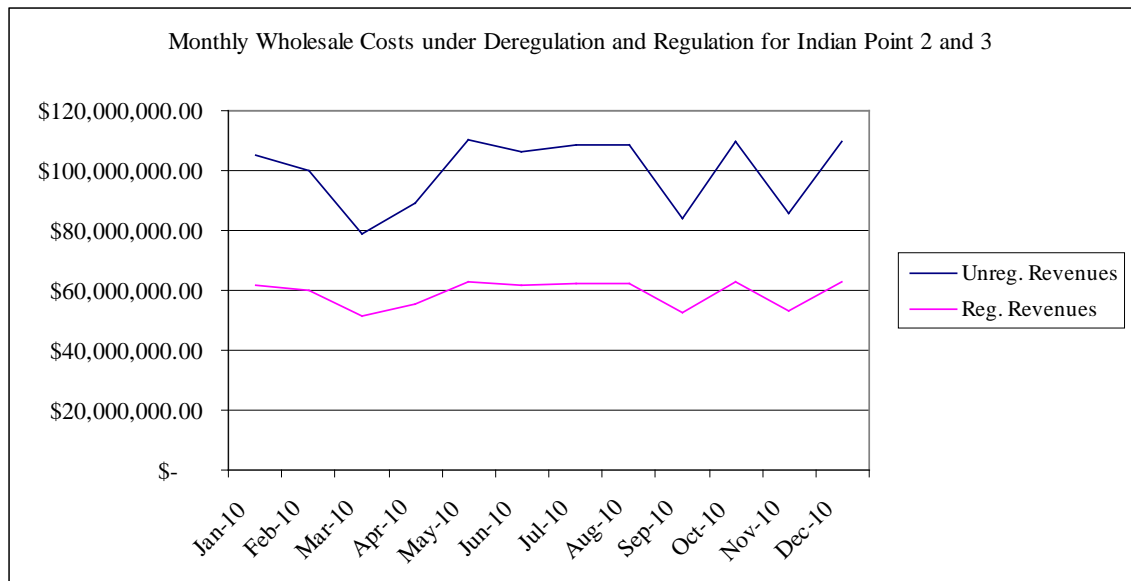
Data Sources:

1. EIA-923, monthly time series file, fuel and generation data
2. NEI, resources & stats data

## Appendix C

Table 11. Monthly Excess Wholesale Costs for Indian Point Units 2 and 3

	Indian Point 2			Indian Point 3		
	NYISO Wholesale Costs	Regulated Wholesale Costs	Excess Wholesale Costs	NYISO Wholesale Costs	Regulated Wholesale Costs	Excess Wholesale Costs
Jan-10	50,431,703	30,399,163	20,032,540	54,868,730	31,457,051	23,411,679
Feb-10	49,411,029	29,987,042	19,423,987	50,795,213	29,836,429	20,958,784
Mar-10	24,198,558	19,806,912	4,391,646	54,836,617	31,444,275	23,392,342
Apr-10	35,402,599	24,330,808	11,071,791	53,522,366	30,921,409	22,600,957
May-10	54,258,048	31,543,785	22,714,263	55,824,881	31,435,950	24,388,931
Jun-10	52,292,066	30,749,973	21,542,093	54,200,154	30,789,563	23,410,591
Jul-10	53,180,081	31,108,530	22,071,551	55,214,257	31,193,018	24,021,239
Aug-10	53,192,801	31,113,666	22,079,135	55,270,790	31,215,509	24,055,281
Sep-10	37,080,748	24,608,045	12,472,703	46,721,730	27,814,321	18,907,409
Oct-10	54,256,511	31,543,164	22,713,347	55,741,775	31,402,887	24,338,888
Nov-10	31,186,618	22,228,151	8,958,467	54,527,466	30,919,782	23,607,684
Dec-10	54,032,109	31,452,556	22,579,553	55,810,896	31,430,386	24,380,509
2010 Total	\$548,922,871	\$338,871,794	\$210,051,077	\$647,334,876	\$369,860,582	\$277,474,294



Data compiled by Na Cheng