

June 15, 2006

PA Public Utilities Commission
Commonwealth Keystone Building
P.O. Box 3265
Harrisburg, PA 17105-3265

Re: Docket No. 00061957
Options to Mitigate Potential Significant Increases
in Electricity Prices

*Comments submitted by Eric J. Epstein on behalf of
Three Mile Island Alert, Inc. and the EFMR Monitoring Group, Inc.**

Deregulation in Pennsylvania has already produced significant increases for local tax payers living in the vicinity of a power plant. Deregulation shifted power plants back to the local tax rolls under the assumption that utilities would pay at least the same amount as they would pay if they been subject to real estate taxes. The reality was quite different and much harsher.

The Public Utility Realty Tax Assessment (PURTA) was the formula used to assess power plant value prior to deregulation PURTA was predicated on a statewide distribution plan. Electric companies influenced the legislature to "restructure" PURTA in the Deregulation Act (1998). The utilities claimed that local communities would increase their revenues, and allow utilities to decrease the amount of taxes paid by focusing on local school districts and municipalities.

* *Mr. Epstein is the Chairman of Three Mile Island Alert , Inc., a safe-energy organization based in Harrisburg, Pennsylvania and founded in 1977. TMIA monitors Peach Bottom, Susquehanna, and Three Mile Island nuclear generating stations. tmia.com*

He is the Coordinator of the EFMR Monitoring Group, Inc. a nonpartisan community based organization established in 1992. EFMR monitors radiation levels at Peach Bottom and Three Mile Island nuclear generating stations, invests in community development, and sponsors remote robotics research. efmr.org

After deregulation the utilities claimed that their generating stations were assessed and taxed disproportionate to the value of their facilities. For example, nuclear plants were being sold at a fraction of their book value, but electric companies utilized this type of data to calculate the value of their generating assets. Nuclear plants now sell for the same value as traditional fossil stations. The "stranded costs" Pennsylvania electric utilities received, through the competitive transmission costs (CTC) were based on earlier miscalculations.(1)

FirstEnergy, Exelon, PECO Energy and PPL essentially double dipped from the pockets of rate payers by collecting over \$11 billion in stranded costs and avoiding up to \$100 million in annual real estate taxes.

From 1998 to 2002, U.S. utilities leapt into deregulation and created multiple strategies to compete... The top five companies in annualized shareholder return were Exelon Corp., Southern Company, Entergy Corp., Western Gas Resources and PPL Corp. (2)

But shareholder return came at a cost for local residents living near power plants who absorbed all of the risk and received a penalty rather than a reward.

While homeowners are paying an average of 30 percent more than they did in 1997, Exelon, Pennsylvania Power & Light, and the other major electric utility companies in the state are paying 85 percent less in taxes on their plants, down from about \$120 million annually to about \$20 million, an Inquirer analysis has found. Meantime, the utilities are passing on their real estate levies to their customers, based not on what the companies are currently taxed but on the far higher sums of six years ago. (3)

1 Millstone was purchased at \$665 per megawatt of generating capacity by Dominion Resources on August 7, 2000, Nine Mile Point -2 was purchased by Constellation Energy at \$652 per megawatt of generating capacity on December 12, 2000, and Indian Point t -2 was purchased at \$621 per megawatt of generating capacity by Entergy on November 9, 2000.

2 *Study Finds Utility Winners During Deregulation Are Companies That 'Stuck to Their Knitting'*, Monday August 4, 2003.

3 *Utilities Save Big As Towns Lose Out* by Anthony R. Wood, *Inquirer Staff Writer*, July 13, 2003.

The three case studies which follow (which are by no means exhaustive) serve to illustrate the impact of deregulation on power plant communities. These economic hardships should be factored when addressing the consequences of future rate shock.

AmerGen & Exelon: Three Mile Island Unit 1

Summary

Since the advent of deregulation tax revenues have plummeted \$571,440 annually. (4) The difference has been absorbed by tax increases, including double digit tax hike in Dauphin County. Lower Dauphin School District spent \$75,000 in legal and appraisal fees to fight AmerGen's assessment of Three Mile Island, and increased its taxes and the price of school lunches to make up for the shortfall. In addition, staffing levels at TMI decreased by 25% to 30%.

On July 17, 1998 AmerGen announced that it reached an Agreement with General Public Utilities (GPU) to purchase Three Mile Island -1. According to AmerGen, their labor force has shrunk substantially during deregulation:

<u>Year</u>	<u>Exelon</u>	+	<u>Contractor</u>	<u>= Total Number of Employees</u>
1998				804
<i>(Source: EFMR Meeting at TMI)</i>				
1999				704
<i>(Source: EFMR Meeting at TMI)</i>				
2000	579		65	644
<i>(Source: EFMR Meeting at TMI)</i>				
2001	517		81	598-618
<i>(Source: EFMR Meeting at TMI)</i>				
2002:	532-540		103	643
<i>(Source: EFMR Meeting at TMI)</i>				
2003:				550
<i>(Source: Bruce Williams, TMI site VP.)</i>				
2005:				620
<i>(Source: Press & Journal, Middletown, 9/14/05)</i>				

⁴ Source: AmerGen and Exelon Business Service Company representatives in annual meetings with EFMR Monitoring at Peach Bottom and Three Mile Island.

TMI-1 was the first nuclear power plant sold in the United States (1999). The net book value at the time of the sale was approximately \$592 million, but the plant and fuel inventory sold for \$99 million. (5) TMI-1's present value is estimated between \$600 to \$650 million. (6)

According to Dauphin County, the Fair Market Value for TMI-1 was \$64,942,500. According to TMI's owners, the plant is only worth \$5 million. This position is baffling given the Company's replacement of the reactor vessel head Exelon stated cost between \$15 million and \$18 million. (7)

Capacity updates have actually increased the value and generating capacity of TMI when deregulation shifted power plants back to the local tax rolls under the assumption that utilities would pay at least the same amount had they been subject to real estate taxes.

From 1998 through 2003, according to AmerGen and Exelon, TMI's tax payments to Dauphin County have steadily decreased from \$506,956 in 1998 to \$146,940 for 2002 *and* 2003.

Year	Amount
1998	\$506,956
1999	\$206,397
2000	\$129,171
2000 - 2001	\$146,940 (Two years)
2002 -2003	\$146,940 (Two years)

5 Source: 1999 GPU Annual Report.

6 Projected value based on British Energy sale. "Exelon was British Energy's (BE) partner in the AmerGen joint venture that bought three U.S. nuclear plants--Clinton, Oyster Creek and Three Mile Island-1. As expected, BE received about (U.S.)\$277-million prior to various adjustments." (*Platts Nuclear News*, December 23, 2003)

7 Sources: *Nuclear Regulatory Commission*, "Nucleonics Week", (*Platts Publications*) and *Company Press Releases*.

The figures from 2000-2003 reflect an Interim Settlement Agreement amount. AmerGen will actually pay less in future years, “Under the proposed settlement, the assessment of Unit 1 would drop from \$64.9 million to \$20 million in 2005, then \$18.3 million through 2008.” (8)

FirstEnergy: Three Mile Island-2

Summary

Area residents are actually paying to have a high-level radioactive waste in their back yard. Over a five year period. FirstEnergy will receive \$756,826 from Lower Dauphin School District, \$258,593 from Dauphin Count and \$51,038. Londonderry Township.

Three Mile Island Unit-2 (TMI-2) was built at a cost to rate payers of \$700 million. The plant had been on-line for just 90 days, or 1/120 of its expected operating life, before the March-April 1979 meltdown.

One billion dollars was spent to de-fuel the facility. Three months of nuclear power production at TMI-2 has cost close to \$2 billion dollars in construction and cleanup bills; or the equivalent of over \$10.6 million for every day TMI-2 produced electricity. The above-mentioned costs do not include nuclear decontamination and decommissioning or restoring the site to “Greenfield.

From a cleanup staff of over 1,000, GPU-Nuclear now maintains a skeletal crew and subcontracts with Exelon for services on the Island.

8 Source: *Patriot News*, January 05, 2005.

In March, 2005 FirstEnergy declared that Three Mile Island Unit-2 was “worthless”. In an out-of-court settlement with Lower Dauphin School District, Londonderry Township and Dauphin County, the plant assessment was reduced from \$16.2 million to zero. Not only will the plant will be exempt from property taxes, but the tax appeal settlement forced Dauphin County, Lower Dauphin School District and Londonderry Township to pay back real estate taxes of \$1.07 million collected from 2002 to 2004.

EFMR was retained as a consultant to Dauphin County during the property valuation case. On February 20, 2005, the group submitted its findings, *Re: Property Valuation Assessment of Three Mile Unit-1 & Three Mile Unit-2 prepared by EFMR Monitoring Inc.*, and found that:

TMI-2 is well situated to host another electric generating facility due To access to water, the PJM grid, and proximity to air, rail, and highway systems...TMI-2 has **immense value** as an interim high-level, radioactive waste storage site for TMI-1 which loses off-load refueling capacity in 2018...According to the NRC , as of September, 2004, \$421 million resides in the TMI-2 Decommissioning Fund (2003 dollars.) (Please refer to enclosed PDF).

Three Mile Island is located in the PPL rate base (and with the exception of Met Ed pockets in York and Lebanon Counties) few area residents receive electricity from TMI.

Pennsylvania Power Light Corporation

Summary

PPL innovated the “coal shoulder” approach to property tax reconciliation. Communities and schools located near its power plants were starved of revenue and school budgets were held hostage as PPL refused to escrow taxes.

PPL has been recovering \$2.97 billion in uneconomical stranded costs associated with constructing a nuclear generating station over an eleven year period. The terms are part of the 1998 Negotiated Settlement approved by the Pennsylvania Public Utility Commission (PUC) on April 13, 1998.

The Susquehanna Steam Electric Station (SSES) was at a cost to rate payers of \$4.0 billion. Some of us have already paid PP&L \$315 million to recover the cost of building SSES-1. The Commission also granted \$203 million or the equivalent of a 16% rate increase in 1983. An additional 8% rate increase, or \$121 million, was added in 1985 to pay for SSES-2.

Under PURTA, the SSES was assessed at \$3.8 billion. PPL argued that the asset was only worth \$74 million. PPL refused to pay or escrow back taxes that they owed to the Berwick School District and Luzerne County. The Company now pays \$3 million a year to the county, school district and Salem Township as opposed to the \$30 million PPL “contributed” to PURTA prior to deregulation. (9)

The current transmission and distribution increase of 8% has amplified the burden hostage rate payers paid to construct the “uneconomical” nuclear plant.

In addition, there is a gap between what PPL collects from rate payers and what the Company pays in taxes. The Company’s adversarial position with Pennsylvania communities in regard to Revenue Neutral Reconciliation at GENCO facilities, e.g., Berwick, Northeastern and Penn Manor School Districts has created funding deficits and a vast reservoir of ill-will.

9 In December 2000 PPL persuaded a Luzerne County judge to assess the nuclear power plant at \$165.4 million.

From 2000 through 2009 PPL is including in its customer billings \$280 million in real estate levies but paying only \$3 million annually in tax payments. This an estimated 10-year windfall of \$250 million

This pattern was repeated in northern York County where PPL refused to pay property taxes on Brunner Island in the Northeastern School District for 2000 and 2001 because it claimed the assessed value, originally set by the county at \$43 million, was grossly inflated.

Northeastern School District, where more than 20 percent of the residents live below the poverty line, proposed cutting textbooks, maintenance, technology and athletics in May-June 2002 to make up for an \$850,000 short fall. PPL refused to pay \$2.2 million in back taxes. PPL did; however, pay \$788,067 for its 2002 taxes.

Proposed Remedies

- The PUC should acknowledge that there is a problem and that communities living near devalued power plants have already experienced economic hardship as a result of deregulation.. As such, the PUC should authorize an Investigation.
- The PUC should recommend statewide power plant valuation be predicated on an income based approach in order to rectify the existing tax anomalies.
- The PUC should recommend that the "comps" for power plants be based on real equivalents. For example, the SSES a boiling water reactor, was compared to two pressurized water reactors ten years older, i.e., Three Mile Island-1 and Indian Point-2. The night before the PPL case came to court, 90% of IP was sold for \$900 million and Undermined PPL's argument.
- The PUC should create a reduced rate tariff for customers adversely affected by Revenue Neutral Reconciliation tax rates to offset the economic hardship imposed by RNR collections.
- The PUC should create a dedicated residential program for low income households, senior citizens, those living on fixed incomes and other special populations living in RNR affected areas.

Respectfully submitted,

Eric Epstein

Date: June 15, 2006

February 20, 2005

***Re: Property Valuation Assessment of Three Mile Unit-1 &
Three Mile Unit-2 prepared by EFMR Monitoring Inc.***

Dauphin County Commissioners:

Enclosed you will find an analysis of the proposed Settlement between Exelon and Dauphin County and FirstEnergy and Dauphin County based on the limited legal data I received. This study is being embargoed until Tuesday, February, 22, 2005, at which time it will be released to the general public.

The proposed Settlement demonstrates a lack of understanding of the technical, mechanical, and financial status of Three Mile Island and its environs. In addition, there appears to be a general reluctance to pursue alternative legal remedies.

Frankly, I've been disappointed by the lack of communication from the Commission given the import of this matter and the donation of services rendered by EFMR.

This Settlement proposal coincides with Exelon's decision to abandon its real-time, gamma monitoring program (Reuter Stokes) around Three Mile Island in order to save an estimated \$250,000 annually. This leaves EFMR as the only entity (including AmerGen, the DEP, and the NRC) providing real-time gamma monitoring for radioactive emissions from Three Mile Island. Unfortunately, we can no longer offer that program free of costs to local municipalities.

Sincerely,

Eric J. Epstein, Coordinator

Property Valuation Assessment of Three Mile Unit-1 and Three Mile Unit 2

Three Mile Island Unit-1

For purposes of this Study, EFMR is assuming the “income approach” to property valuation is not viable. There is precedent available to attack the “cost approach” utilized by Exelon and FirstEnergy (*See Enclosure 1.*) Furthermore, there are several problems with the “cost approach” as referenced in *Allegheny Energy v. Greene County Board of Assessment Appeals* and *PP&L Inc. v. SEPTA*. However, the problems with the Agreement are separate and apart from the current debate over “cost approach” versus “income approach” valuation.

The PP&L decision at the Susquehanna Steam Electric Station (SSES) had several fatal flaws. The plant was undervalued regardless of what “approach” was utilized. Still, the SSES had a \$100 million valuation for 2000. The 2001 valuation was approximately \$160 million.

The "comps" for the SSES, a Boiling Water Reactor (BWR), at the time of the Settlement were two Pressurized Water Reactors (PWR's) ten years older than the SSES, i.e., Three Mile Island-1 and Indian Point-2 . The night before PPL the case was scheduled for Court, 90% of Indian Point was sold for \$900 million. Although the sale undermined PPL's “cost approach” argument, its import was ignored by the local magistrate.

The SSES was eventually valued at \$56 million, or \$18 million less than the Columbia Hospital which was appraised at \$74 million .

Contrary to findings supplied by Exelon, FirstEnergy and the County, Unit-1 was affected by the Three Mile island-2 (TMI-2) accident in March 1979. The NRC forced it to shut down from April 1979 through October, 1985. TMI-1's license was initially scheduled to terminate in 2009, but was extended to 2014 to reflect the Nuclear Regulatory Commission's (NRC) Order of July 2, 1979.

The Settlement (1) does not appear to factor the capital costs and property upgrades associated with 9/11 (*Refer to discussion on p. 7, **Security upgrades***), or the extended refueling outage at Three Mile Island-1 (TMI-1) in 2001. Numerous pending property upgrades representing millions of dollars in capital investments are also missing, i.e., reactor vessel change-out, impending steam generator replacement, and waste storage value.

Please note that from October 9- December 8, 2001, TMI was shut down for a 58 day refueling outage that was initially scheduled to last 29 days. The outage cost Exelon over **\$100 million** in lost revenues, replacement energy, planned and unplanned repairs, and upgrades. Among the “big-ticket” items: replacement of the turbine generator and four main transformers; repairs of cracks in six control-rod drive mechanisms; trouble shooting on chronic emergency feed water problems; and, experimental steam tube generator repairs which led to the “unplugging” of 870 tubes and removing of 266 tubes from service.

The initial cost of the reactor vessel (RV) change-out in the fall of 2003 was estimated at \$14 million. The new vessel head, plus the disposal of the old reactor lid, was estimated by the Company to be somewhere between **\$15 and \$18 million**, according to AmerGen. (*See Enclosure 2 for cost comparisons*). However, the *Patriot News* reported on January 13, 2004, that,

Exelon indicated that the value for the reactor vessel was \$6 million. According to James Foreman, the township's codes enforcement officer, it would have cost Exelon \$27,000 for the permit [as opposed to the \$15,000 settlement]... Foreman said he wondered why the value of the vessel head had dropped from \$15 million to \$6 million.

TMI-1 continues to operate with the most damaged steam generating tubes in the country. From November 1981 to January 1982, GPU discovered it had damaged over 29,000 steam generator tubes at TMI-1.

¹ The Agreement does not appear to factor the 11% increase in power, i.e., “power uprate” at Three Mile Island-1 in 1988.

The NRC has confirmed that a license extension (2) at TMI-1 would necessitate the replacement of steam generators A & B. (3) Replacement costs in 1997 dollars were projected at \$38.4 million per generator.

Prairie Island-1, a comparable reactor with the same retirement date as TMI, replaced two steam generators in November, 2004 at a cost of **\$132 million**.

There is no financial uncertainty (4), and minimal exposure for Exelon during the the replacement of the reactor vessel and the impending steam generator change-out.

TMI-1 has a long-term power purchase agreement that shields it from any price uncertainties or market fluctuations associated with the energy marketplace. According to Exelon's 2004 Annual Report, "Generation agreed to purchase from AmerGen all the energy from Unit No. 1 at Three Mile Island Nuclear Generating Station from January 1, 2002 through December 31, 2004" (*Notes to Consolidated Financial Statements*, p. 132.)

2 Conversation between Eric Epstein, TMI-Alert, and Tim Coburn, NRC-NRR, Bethesda, Maryland, April 26, 2001.

3 Prior to the 2001 refueling outage, "...OTSG "A" has plugged 1,300 tubes and OTSG [Once Through Steam Generator] has 395 plugged tubes, totaling 1,695 plugged tubes at TMI-1. Each OTSG has 15,531 tubes.

The NRC approved limit for plugged and/or sleeved tubes was a maximum of **2,000 total tubes**. However, the NRC approved an Amendment to TMI's tech specs and increased the tube plugging limit to 20% per OTSG, or **3,106 tubes per OTSG**. OTSG "A" has 248 tubes sleeved (one previously sleeved tube has been plugged) and OTSG "B" has 253 tubes sleeved. (AmerGen's reply to Eric Epstein, *Responses and Concerns Regarding TMI-1 License Transfer Application*, January 11, 1999.)

Exelon is in the process expanding of a spent-fuel storage capacity. The project will last from 2002-2009 and re-rack “wet storage”. AmerGen is increasing capacity through three phases:

- Phase 1 - Complete;
- Phase 2 - Completed in mid-2003. An additional 216 re-racked cells added were installed, or enough for three refueling cycles, were installed.
- Phase 3 - To be completed by mid-2009, and would add another 432 re-racked cells extending storage capacity through 2018. (4)

Because of the additional capacity, and Three Mile Island-1 core size, (177) the Company will not lose full core off-load capability until 2018. In other words, lack of waste storage space will not force TMI to close prior to its license expiration. (5)

4 Source: *AmerGen and Exelon Meeting with EFMR on January 23, 2003, at the Three Mile Island Training Center, S 1-2: Peach Bottom-2 & -3 and Three Mile Island-1, Meeting & Action Items.*

5 "The configuration of spent fuel pools is essentially the same for all nuclear power plants. The pools are rectangular in vertical and horizontal cross section. The spent fuel assemblies are stored in racks at the bottom of the pool. Insertion or removal of the fuel assemblies is accomplished vertically from above the storage racks. The 13.5 to 14.5 foot long fuel rods must remain submerged during fuel removal or insertion into the racks; thus, for this reason alone, the spent fuel pool must be at least 27 feet deep. However, an additional eight to ten feet of water is required for shielding an irradiated fuel assembly just removed from the reactor. The spent fuel pool depth must therefore be approximately 40 feet. The direct radiation at the the pool surface from the fuel stored at the bottom is very low because of the water depth of about 25 feet above the top of the irradiated fuel assemblies is equivalent to about 10 to 11 feet of concrete shielding value." (David Lochbaum, Union of Concerned Scientists, "Nuclear Waste Disposal Crisis", Spent Fuel Pools, p. 52., 1996.)

Property Value and Assets Not Captured or Accounted for in the Proposed TMI-1 Settlement

Decommissioning fund:

The amount of decommissioning funds estimated to be required pursuant to 10 CFR 50.75 (b) and (c) is **\$ 339.2 million**. This estimate was made in **2003** dollars, and does not include the costs of dismantling non-radiological systems and structures or the costs of managing and storing spent fuel onsite. (6)

Exelon manages the money in an externally, segregated sinking fund. According to AmerGen, the last official accounting for the fund demonstrated the Company was making progress towards their savings goal:

The amount of decommissioning funds accumulated through December 31 , 2002 was **\$ 285.2 million**. However, [u]nder the plant purchase agreement, there is no remaining amount to be collected from the previous owner [.] A two percent annual real rate of return is being assumed on the decommissioning trust funds. Financial assurance for decommissioning continues to be provided by the prepayment method, coupled with an external trust fund. (7)

6 As part of the purchase agreement between GPUN and AmerGen, GPUN agreed to prefund the TMI-1 decommissioning trust account for at least **\$303 million**. This amount exceeds the minimum amount required by the generic formulas in [10 CFR 50.75\(c\)](#), and thus allows AmerGen to buy TMI-1 without providing additional assurance for any unfunded portion of the decommissioning cost estimate. However, in an effort to forestall any adverse Federal income tax consequences from the sale of TMI-1 and the buildup of additional decommissioning funding required under the terms of the sale, GPUN and AmerGen proposed that GPU Energy (the three owner subsidiaries of GPU, Inc., the parent company of GPUN) hold the decommissioning trust until such time as the U.S. Internal Revenue Service (IRS) issued a favorable ruling on the tax consequences related to the transfer of TMI-1 decommissioning funds. (Dr. William Travers, EDO, NRC, "Lessons Learned from the Transfer of the Operating Licenses of the Three Mile Island-1 and Pilgrim Nuclear Power Stations, July 1, 1999).

7 Jeffrey A. Benjamin, Vice President, Licensing and Regulatory Affairs, AmerGen Energy Company, LLC, March 31, 2003.

Several months later, Exelon spokesman Craig Nesbitt stated, "All of our sites are **fully funded** for decommissioning. They are on track to be fully funded now, and they will be fully funded when the time comes to decommission" (*Lancaster New Era*, December 3, 2003).

Indemnification:

Damages attributable to another accident are capped through provisions in the Atomic Energy Act (1954). The Price-Anderson Act (1957), an amendment to the Atomic Energy Act, continues to provide for payment of public liability claims. The Price-Anderson Act was extended by Congress on January 1, 2004, and provides pool insurance that would not be available on the open market.

Please note that homeowners, property owners and businesses are precluded from procuring insurance, i.e., "Nuclear Hazard Exclusion Clause" that would protect their property investment or provide loss of business revenue in the event of **another** nuclear accident.

TMI's liability cap for harm and damages to the local population also extend to the local workforce. Exelon subscribes to the American Insurers Master Worker program "for worker tort claims file for bodily injury caused by a nuclear energy accident" (*Exelon's 2004 Annual Report Nuclear Liability Insurance*, p. 63.)

Insurance:

AmerGen/Exelon carry property and liability insurance on the Three Mile Island Nuclear Generating Station. The policy, procured through the Price-Anderson Act, normally covers approximately \$200 million in damages. Exelon purchased the maximum amount of liability insurance for all of its operating sites, including TMI or **\$300 million** (*Exelon's 2004 Annual Report Nuclear Liability Insurance*, p. 32.)

Exelon also carries Replacement Power Cost Insurance “in the event of a major accidental outage at a nuclear station”, (Annual Report, p. 63).

Land improvements:

- Reactor Vessel change-out, 2003: **\$15 - 18 million**
- Replacement of steam generators A & B, Pending: **\$76.6 - \$132 million**
- Refueling repairs minus RV change-out, 2001 & 2003 **\$50 - \$100 million**

Relicensing:

Craig Nesbitt, an Exelon spokesman, stated in December 2004, “...that Peach Bottom and TMI, will be relicensed for another 20 years, which gives utilities more time to save decommissioning funds” (*New Era*, December 3, 2003.)

Depending on the NRC’s evaluation, the submittal process could be approved during the Settlement period. The Nuclear Regulatory Commission, on average, takes two years to review a license renewal application. Costs vary, but at Peach Bottom, the total cost of obtaining the renewed licenses was approximately **\$18 million**, (including the NRC evaluation), or about \$8 per kilowatt hour in 2001 dollars.

Security upgrades:

In July, 2004, Exelon announced it would spend **\$70 million** to install a series of 25-foot guard towers at its ten nuclear plants, including TMI, Peach Bottom and Limerick .

Waste storage:

The Company stores at least 730 metric tons of high-level radioactive waste at Three Mile Island. TMI-1 generates an additional 30 metric tons annually.

Based on the Agreement between the Department of Energy (DOE) and Exelon, the Company will receive remuneration of at least **\$80 million** for waste maintenance costs . The DOE Agreement establishes a precedent of **land added value for the interim storage** of nuclear waste at TMI-1 and TMI-2. (*See Enclosure 3.*)

Even though TMI-1's license expires in 2014, Exelon has constructed additional waste storage onsite through **2018**.

In addition, TMI has an early "queue" to dispose of nuclear waste offsite. However, this "queue" can be **sold** on the open market to another licensee which possesses a late "queue". The value of the place marker is unknown.

THREE MILE ISLAND - UNIT 2

The operating reactor accident occurred in March 1979. Plant de-fueling was completed in April 1990. Post De-fueling Monitored Storage was approved in 1993. There is no significant dismantlement underway. The plant shares equipment with the other operating unit, which was sold to AmerGen in 1999. GPU Nuclear retains the license for TMI-2 and contracts to AmerGen for maintenance and surveillance activities. Both units are currently expected to be decommissioned together in 2014. The spent fuel was removed except for some debris in the primary systems. The removed fuel is currently in storage at the Idaho National Engineering and Environmental Laboratory. The Department of Energy has taken title and possession of the fuel (NRC, "Fact Sheet").

In July, 1981, a **\$1 billion defueling plan** was proposed by Governor Richard Thornburgh. Most of the moneys were derived from rate payers and tax payers. Below is a list of the "contributors" (8):

\$305 million	Insurance
\$246 million	General Public Utilities Customers
\$ 91 million	Nuclear Industry (United States)
\$ 83 million	Department of Energy
\$ 82 million	General Public Utilities (Corporate)
\$ 30 million	Commonwealth of Pennsylvania
\$ 18 million	Nuclear Industry (Japan)
\$11 million	State of New Jersey
<u>\$38 million</u>	<u>Unfunded shortfall</u>
\$987 million	

8 The costs to defuel TMI-2 do not include nuclear decontamination and decommissioning or restoring the site to "Greenfield". Three Mile Island-2 is in PDMS/SAFSTOR .

Property Value and Assets Not Accounted For or Captured in the Proposed TMI-2 Settlement

Decommissioning fund:

In July 1990, GPU submitted its funding plan for placing \$229 million in escrow for radiological decommissioning. By 1997, the decommissioning estimate had risen to \$433 million (1997, GPU Annual Report.)

According to the NRC , as of September, 2004, **\$421 million resides in the TMI-2 Decommissioning Fund** (2003 dollars.) (9)

Generator and turbine:

TMI-2's turbine(s), which is for sale, has value and use if accelerated stress corrosion or relicensing force TMI-1 to seek a replacement.

TMI-1 and TMI-2 were built with Westinghouse turbines, and 1500 and 1800 rpm pressure turbine discs. The NRC staff, and Westinghouse's Turbine Division determined on November 20, 1979 that cracking attributed to stress corrosion phenomena had been found in these turbines.

A turbine change-out at TMI-1 may be necessary.

Resale value needs to be determined, but a high-quality used turbine at TMI-2 could have enormous resale value. The Cooper Nuclear power plant in Nebraska is replacing both turbines. Cooper is a 778-MWe, BWR that came on line at roughly the same time as TMI-1 (July, 1974). The price for replacing both turbines to accommodate a 20-year relicensing extension is **\$35 million.**

9 A recent withdrawal for an undisclosed amount was made on February 14, 2005 to dispose of TMI-2 filters stored at the INEGL in Idaho.

Insurance value:

GPU Nuclear (and now FirstEnergy) received permission from the NRC on July 21, 1999 to reduce the insurance at TMI-2 from \$1.06 billion to **\$50 million**.

GPU collected **\$560 million** in insurance as a result of the TMI accident. The Company's insurers have paid over **\$82 million** in health, economic and evacuation claims since March 1979.

Resale value:

TMI-2 is well situated to host another electric generating facility due to access to water, the PJM grid, and proximity to air, rail, and highway systems.

Waste onsite:

In August 1993, Dr. Michio Kaku, Professor of Nuclear Physics, City University of New York, evaluated studies conducted or commissioned by GPU and the NRC on the amount of fuel left in TMI-2. Dr. Kaku concluded, "It appears that every few months, since 1990, a new estimate is made of core debris, often with little relationship to the previous estimate...estimates range from 608.8 kg to 1,322 kg...This is rather unsettling...The still unanswered questions are therefore: precisely how much uranium is left in the core, and how much uranium can collect in the bottom of the reactor to initiate re-criticality?"

There is **no prohibition against radioactive waste transfer from Unit-1 to Unit-2**. For example, pumps sold to TMI-1 in 1999 are stored at TMI-2. Both units share the same waste handling building (*See Enclosure 4, TMI-2 Amendments No. 53, License No. DPR-73*).

TMI-2 has **immense value** as an interim high-level, radioactive waste storage site for TMI-1 which loses off-load refueling capacity in 2018.

Recommendations and Remedies:

1) Agreement should be decoupled and evaluated on a Unit-1 (Exelon) by Unit-2 (FirstEnergy) basis;

2) The County and Lower Dauphin School District and Londonderry Township should pool their collective resources and retain Counsel to pursue, clarify, and resolve issues raised in this Analysis; and,

3) The Proposed Settlement should be rejected and supplanted by an Agreement in place at the Limerick Nuclear Generating Station in Montgomery County for the Limerick 1 & 2 nuclear power facility.

The collective taxing bodies involved in this Settlement process should renegotiate an Agreement that more closely resembles the Limerick-Exelon Settlement. (*Refer to table on the following page for comparisons*).

County:

- **TMI:** Dauphin County would receive **\$147,000 in 2004, \$123,000 in 2005, and \$112,000 for 2006-2008** (11);

vs.

- **Limerick:** Montgomery County would receive **\$392,400** from Exelon from 2005-2009 (12).

School District:

- **TMI:** Lower Dauphin School District would receive **\$395,000 in 2004, \$332,000 in 2005 and \$303,000 for 2006-08.**

vs.

- **Limerick:** Spring-Ford Area School District, “Under the proposed terms of the four-year agreement, PECO would pay the school district **\$2,082,000 in taxes** for both the 2005-06 and 2006-07 school years and **\$1,874,260** for the 2007-08 and 2008-09 school years”.

Spring-Ford Area School District would also receive about **\$500,000 more** in state reimbursements from the Department of Education as a result of the agreement.

Township:

- **TMI:** Londonderry Township would receive **\$30,000 in 2004, \$34,000 in 2005 and \$31,000 in 2006-08.**

vs.

- **Limerick:** The Township would receive **\$109,230** from **2005 -2009.**

10 **Source:** *Patriot News*, January 05, 2005.

11 **Source:** *The Mercury*, February 3, 2005.

10 **Three Mile Island -1:** “Under the proposed settlement, the assessment of Unit 1 would drop from \$64.9 million to \$20 million in 2005, then \$18.3 million through 2008” (*Patriot News*, January 05, 2005).

11 **Limerick 1 & 2:** “A countywide reassessment, which took effect in 1998, placed a value of \$939.4 million on the nuclear plant property. PECO appealed the assessment in 1999 to the county Board of Assessment Appeals and won a \$26.8 million assessment reduction to \$912.6 million.”

“PECO, claiming that even the \$912.6-million assessment was excessive, appealed that decision to the county court where it has been pending since that time.”

“PECO contended that the value of the property, which includes a nuclear power plant constructed in the late 1970s at a cost of \$6.8 billion, is less than zero.” (*The Mercury*, February 3, 2005.)