BEFORE THE MARYLAND PUBLIC SERVICE COMMISSION

CASE NO. 9208

IN THE MATTER OF

BALTIMORE GAS AND ELECTRIC COMPANY

FOR AUTHORIZATION TO DEPLOY A SMART GRID INITIATIVE AND

TO ESTABLISH A SURCHARGE MECHANISM

FOR THE RECOVERY OF COST

REPLY TESTIMONY OF J. RICHARD HORNBY

ON BEHALF OF THE

MARYLAND OFFICE OF PEOPLE'S COUNSEL

AUGUST 2, 2010

CASE NO. 9208
DIRECT TESTIMONY OF J. RICHARD HORNBY

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, EMPLOYER, AND PRESENT POSITION.

A. My name is James Richard Hornby. I am a Senior Consultant at Synapse Energy Economics, Inc., 22 Pearl Street, Cambridge, MA 02139.

Q. ARE YOU THE JAMES RICHARD HORNBY WHO PREVIOUSLY TESTIFIED IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. Baltimore Gas and Electric Company ("BGE" or "the Company") filed an application dated July 12, 2010 requesting that the Commission rehear its Order No. 83410 ("Order") in this Case. In Testimony dated July 19, 2010 BGE Witness Case provides support for the Company's application for rehearing. The OPC has retained three witnesses to address the Company's request from the perspective of residential customers, myself, Ms. Nancy Brockway and Mr. David Effron. Our testimony addresses the Company's application relative to the four components of an alternative proposal the Commission specified in its invitation to BGE (Order, page 7).

- My testimony addresses the Company's Updated Business Case as well as its response to the Commission's invitation to provide "...a workable methodology by which BGE will mitigate and more fairly allocate between the Company and its customers the risk that the proposal will not provide the benefits underlying BGE's business case, or that it will cost significantly more than BGE currently projects."

- Ms. Brockway addresses certain aspects of the Company's Updated Business Case, its proposed plan for educating its customers regarding its new proposed rate structure as well as its mitigation and allocation of risk.
- Mr. Effron addresses the Company's proposed cost recovery mechanism.

Q. WHAT DATA SOURCES DID YOU RELY UPON TO PREPARE YOUR TESTIMONY AND EXHIBITS?

A. I relied primarily on the testimony and workpapers of Mr. Case as well as his responses to various data requests.

Q. PLEASE SUMMARIZE YOUR CONCLUSION REGARDING BGE'S UPDATED BUSINESS CASE.

A. My conclusion is that BGE's Updated Business Case is not highly conservative and that it is not a material change from its original Business Case with Department of Energy ("DOE") funding.

The Company states that its Updated Business Case has a Total Resource Cost ("TRC") benefit to cost ratio of 3.7 and that it is based upon highly conservative assumptions. However, the projection of benefits underlying the Updated Business Case is essentially the same as the projection underlying the original Business Case with DOE funding in two key respects. First, the majority of projected benefits in both cases are based upon the Company's assumption that over 75% of residential customers will respond to the new Peak Time Rebate ("PTR") on a sustained basis for 10 years, which is not a highly conservative assumption. Second, approximately 50% of total projected benefits in both cases hinge on the Company's assumption that reductions in demand will be worth more than $176 per MW/day from 2014 for ten years, which is also not a conservative assumption.

Q. PLEASE SUMMARIZE YOUR CONCLUSION REGARDING THE RISK THAT ACTUAL BENEFITS FROM THE PROPOSED PROJECT MAY BE LESS THAN THE PROJECTED BENEFITS UNDERLYING BGE'S UPDATED BUSINESS CASE.

A. There is a significant risk that actual benefits from the proposed project will be less than the projected benefits underlying BGE's Updated Business Case. This risk is due to the likelihood that actual participation in the PTR will be lower than the Company's projections and that the value of demand reductions in the PJM capacity market will be less than the Company's projections. It also appears that the actual costs of the proposed project will be higher than the projected costs underlying BGE's Updated Business Case due to the incremental costs of in-home devices, customer communications and an upgraded customer information system ("CIS"). The TRC ratio of actual benefits and costs is likely to be closer to 1.7 than to the TRC ratio of 3.7 projected for the Updated Business Case.

Q. PLEASE SUMMARIZE YOUR CONCLUSION REGARDING BGE'S PROPOSALS FOR MITIGATING THE FINANCIAL RISK ASSOCIATED WITH THE PROJECT AND FOR ALLOCATING THAT RISK BETWEEN THE COMPANY AND ITS CUSTOMERS.

A. There continues to be a financial risk that the project's actual benefits will not exceed its actual costs. BGE has not proposed a material change in the allocation of that risk between itself and its customers.

The Company is proposing to fund its PTR with revenues it would receive from PJM and to supplement that amount, if and when necessary, with revenues it would collect from ratepayers. The Company has not proposed any limit on the revenues it would collect from ratepayers to fund the PTR.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS BASED UPON THOSE CONCLUSIONS.

A. Based upon these conclusions I recommend that the Commission take the financial risk associated with the project into consideration when making its decision as to whether to approve or reject the Company's revised request. If the Commission does approve BGE's proposal, I recommend that it take this financial risk into consideration when deciding upon the method of cost recovery, as discussed by Mr. Effron.

If the Commission approves the Company proposed PTR rider I recommend that the Commission require the Company to limit the net amount it can collect from ratepayers to fund PTR costs in any year, i.e. net of revenues the Company receives from PJM.

II. UPDATED BUSINESS CASE

Q. WHY HAS THE COMPANY SUBMITTED AN UPDATED BUSINESS CASE?

A. In its Order, at page 7, the Commission invited BGE to submit an alternative proposal that "…provides a detailed business case that addresses the costs and benefits of proceeding without mandatory TOU pricing." The Company has submitted an Updated Business Plan in response to that invitation.

Q. PLEASE SUMMARIZE THE UPDATED BUSINESS CASE AND COMPARE IT TO THE ORIGINAL BUSINESS CASE.

A. Mr. Case discusses the Updated Business Case on pages 23 to 28 of his Testimony. Table 1, below, summarizes the Company's original Business Case, its revised original Business Case reflecting its DOE grant, and its Updated Business Case. The benefits and costs reported in this Table are net present values ("NPV"). The benefit to cost ratios are for the TRC test, which does not consider who receives which benefits or who pays which costs. The details underlying Table 1 are provided in Exhibit___(JRH-12).

Table 1			
	Original Business Case	**original Business Case with DOE $**	**Updated Business Case**
Cost			
Capital + O&M	$529	$529	$598
DOE SGIG Grant		(114)	(115)
Total	**$529**	**$415**	**$384**
Benefits by Cause			
Peak reductions by customers	$809	$809	$1,007
Energy Conservation by customers	$190	$190	$129
Distribution System management decisions by BGE	$257	$257	$220
DOE PeakRewards Grant		$56	$61
Total	**$1,266**	**$1,322**	**$1,417**
Benefit to Cost ratio	**2.4**	**3.2**	**3.7**

As indicated in Table 1, the benefit to cost ratio has increased from 2.4 for the original Business Case to 3.7 for the Updated Business Case. That increase is primarily due to the Company's receipt of a DOE grant and to a change in its assumption regarding the long-term market value of capacity in the PJM capacity market. In the original Business Case it assumed that value would be $176 per MW-day, in the Updated Business Case it assumes it would be $227 per MW-day.

Q. DO THE MAJORITY OF PROJECTED BENEFITS IN THE UPDATED BUSINESS CASE HINGE UPON TWO KEY ASSUMPTIONS?

A. Yes. As with its original Business Case, the majority of projected benefits in the Updated Business case hinge upon two key assumptions, i.e. the percentage of customers who will respond to the PTR, or in BGE terms "engage," and the long-term value of demand reductions in the PJM capacity market.

Approximately 70% of the total benefits in the Updated Business Case hinge on the Company's assumption that over 75% of residential customers will respond to the new PTR on a sustained basis for 10 years. As shown in Exhibit___(JRH-12), these are the benefits projected for avoided distribution infrastructure, avoided transmission infrastructure, energy price mitigation, energy revenues, capacity price mitigation and capacity revenues.

Of that sub-set of projected benefits, approximately 75%, hinge on the Company's assumption that reductions in demand will be worth more than $227 per MW-day in the PJM Capacity market from 2014 for ten years. These are the benefits projected for capacity price mitigation and capacity revenues. Those two categories of benefits represent about 50%[1] of the total projected benefits of the Updated Business Case.

Q. ARE THE COMPANY'S KEY ASSUMPTIONS REGARDING PTR PARTICIPATION AND PJM CAPACITY VALUES HIGHLY CONSERVATIVE?

A. No. Mr. Case states on page 23 that "…BGE's business case is highly conservative, and benefits are likely to be higher than projected". My analysis indicates that the two key assumptions underlying the projections of benefits in the Updated Business Case are not highly conservative.

The Updated Business Case assumes that approximately 76% of residential customers will respond to the PTR on a sustained basis for 10 years. That is not a highly conservative assumption for the reasons that Ms. Brockway presented in her Direct Testimony and reiterates in her Reply Testimony. The actual percentage of residential customers who will respond to the PTR is likely to be much lower than 76%.

The Updated Business Case assumes that reductions in demand will be worth more than $227 per MW-day in the PJM capacity market from 2014 for ten years. That is not a highly conservative assumption for the reasons that I presented in Exhibit___(JRH-6) of my Direct Testimony, some of which I reiterate below. The actual value of demand reductions in the PJM capacity market from 2014 to 2023 are likely to be lower than the $227 per MW-day assumed in the Updated Business Case.

Q. BEFORE EXPLAINING WHY THE PROJECTED VALUE OF DEMAND REDUCTIONS IN THE PJM CAPACITY MARKET IS LIKELY TO BE LOWER

[1] The NPV benefits from Capacity Price Mitigation plus Capacity Revenues are $744 million versus total benefits of $1,417 million.

THAN THE COMPANY IS PROJECTING, PLEASE EXPLAIN HOW LOWER PJM CAPACITY PRICES COULD LEAD TO LOWER PERCENTAGES OF CUSTOMER RESPONSE TO THE PTR?

A. It is important to recognize that there is a direct link between PJM capacity prices, the level of the PTR and the number or percentage of residential customers who will respond to the PTR.

First, the value of the PTR is driven primarily by the value of demand reduction in the PJM capacity market. The Company's projections are based upon a PTR of $1.25 per kWh (OPC DR 10-11, OPC DR 10-15). That PTR is based upon a PJM capacity value of $176 per MW-day per Exhibit JMBM-6.[2] If the actual value of PJM capacity proves to be materially less than $176 per MW-day the Company will have to offer a lower PTR. For example, if the PJM price was 50% lower, or $88 per MW-day, the corresponding PTR would also be 50% lower, or $0.62 per kWh.

Second, the number or percentage of residential customers who will respond to the PTR is a function of the level of the PTR. All else being equal, a higher PTR will attract more customers and a lower PTR will attract fewer customers. Thus, if PJM prices are lower than the Company projected, and it has to offer a PTR that is lower than it projected, it is reasonable to expect that the percentage of customers who will respond will be lower than projected.

Q. WHY IS THE PROJECTED VALUE OF DEMAND REDUCTIONS IN THE PJM CAPACITY MARKET UNDERLYING THE UPDATED BUSINESS CASE NOT A HIGHLY CONSERVATIVE ASSUMPTION?

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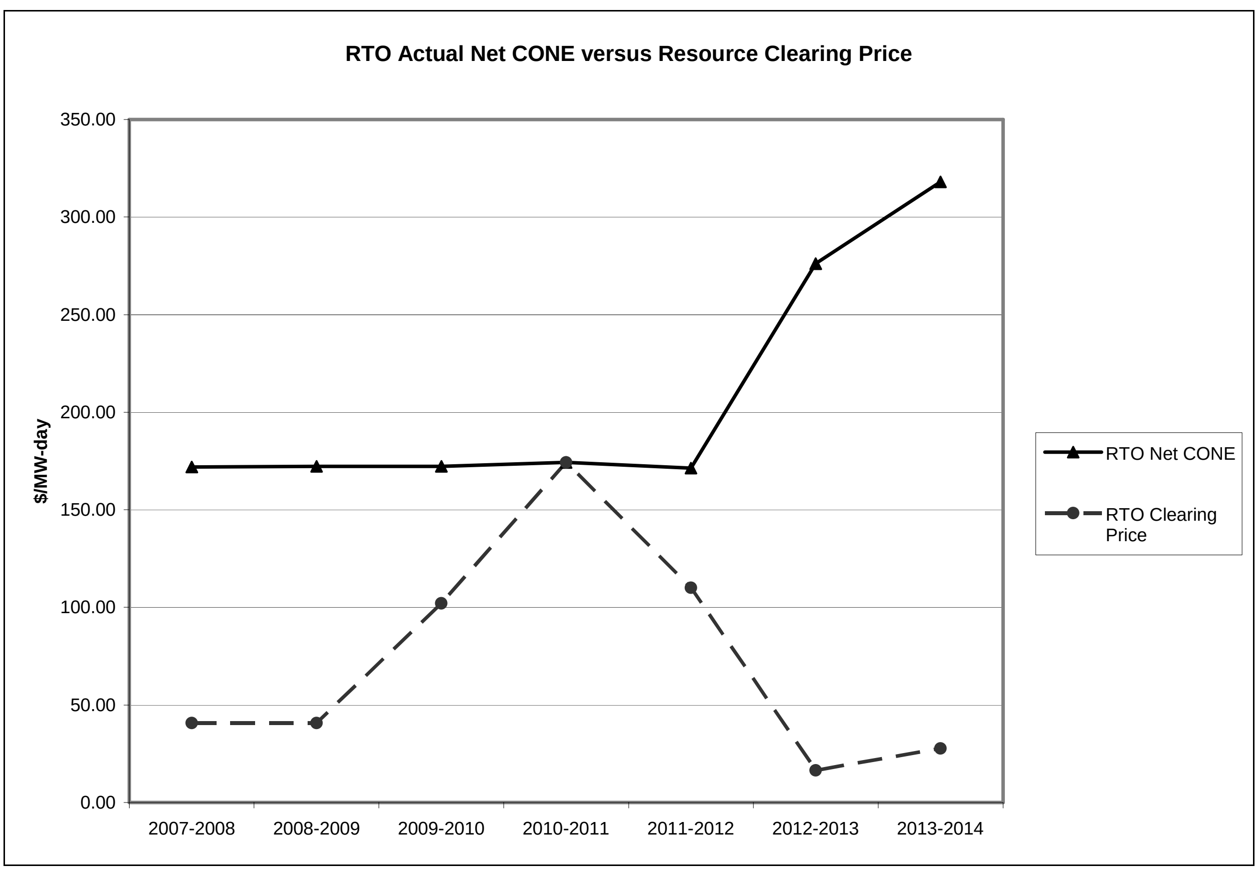
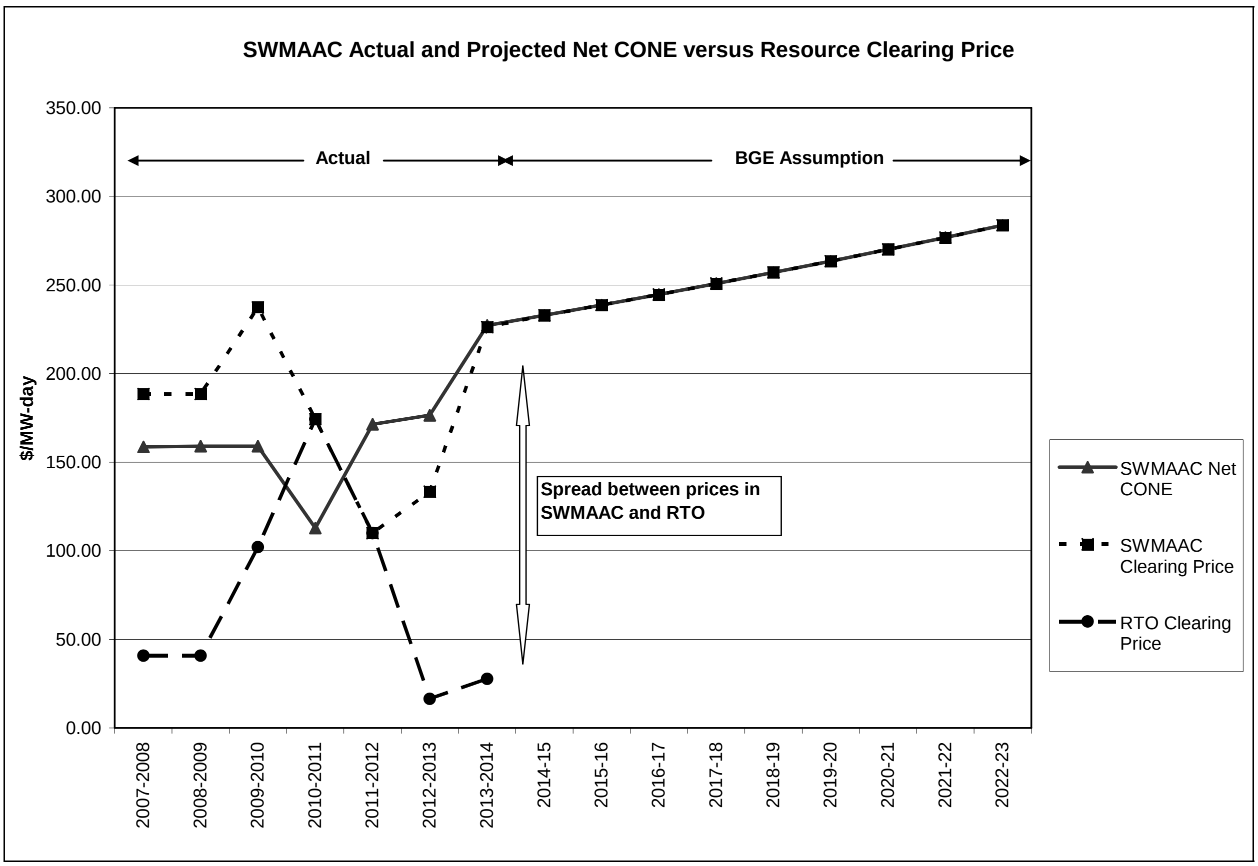
[2] PTR of $1.25/ kWh = $176.44 per MW-day * (365 days / 1,000 kW per MW) * 1.12 gross up / 58 hours.

A. The projected value of demand reductions in the PJM capacity market underlying the Updated Business Case assumes that, on average, the market price of capacity in the zone in which BGE operates, SWMAAC, will clear at levels equal to the net cost of bringing new a new gas-fired combustion turbine ("CT") into service. This unit cost, referred to as the net Cost Of New Entry ("net CONE"), is over $227 per MW-day in 2014. This is not a highly conservative assumption. In fact it is less conservative than the assumption of $176 per MW-day the Company used in its original Business Case.

First, this assumption is inconsistent with empirical evidence from other zones and jurisdictions which demonstrates that capacity market prices can be considerably less than net Cone when there is adequate existing capacity and demand response to meet peak demand. The chart below plots the trends in net Cone and in market prices for regions in PJM that are not subject to transmission constraints, referred to as the RTO.



Second, this assumption is not based upon an analysis of the demand and supply factors that will affect the wholesale market for capacity in PJM over that period (Responses to OPC DR2-8 and 2-24) nor on a critique of Exhibit___(JRH-6) of my Direct Testimony which describes market fundamentals that are likely to cause lower capacity prices. The chart below plots actual prices in SWMAAC and RTO as well as the Company's assumption regarding future market prices in SWMAAC.



For example, this assumption assumes that the existing transmission constraints that currently contribute to the current spread between prices in SWMAAC and prices in RTO will never be eliminated. In contrast, at least three transmission projects are scheduled to be in-service in the 2014 – 2015 timeframe, i.e. MAPP, PATH and SR500.

Third, this assumption is not supported by a forecast of PJM capacity market values for SWMAAC from 2014 onward (Response OPC DR10-4e).

Q. ARE ACTUAL BENEFITS LIKELY TO BE HIGHER THAN THE PROJECTIONS UNDERLYING THE UPDATED BUSINESS CASE?

A. No. Mr. Case states on page 23 that "…BGE's business case is highly conservative, and benefits are likely to be higher than projected". Actual benefits are likely to be lower than the projections underlying the Updated Business Case because, as I have just explained, the two key assumptions underlying the projections of benefits in the Updated Business Case are not highly conservative. In addition, there are six categories of benefits listed in Table 1 of Mr. Case's testimony which the Company has not quantified (Case, pp. 24-25). These categories are PeakRewards Synergies, Reduced Transmission Congestion, Environmental Benefits, Improved Power Delivery, Reduced Uncollectible Costs and Improved Meter Functionality. As I stated in my Direct Testimony, until the Company actually quantifies each of these benefits in some manner, in physical terms if not in monetary terms, I recommend that the Commission not give them any weight.

Q. HAVE YOU PREPARED AN UPDATED ALTERNATIVE CASE THAT PROJECTS BENEFITS BASED UPON MORE CONSERVATIVE ASSUMPTIONS AND THAT INCLUDES ADDITIONAL COSTS?

A. Yes. I have prepared an Updated Alternative Case with a somewhat higher estimate of costs and with a lower estimate of benefits. This Updated Alternative Case is comparable to, and an update of, the alternative/sensitivity case I presented in my Direct Testimony. That estimate, an alternative case to the Company's original Business Case, was a composite of elements from three separate scenarios analyzed by Mr. Vahos, i.e., *Lower Projected PTR Participation, 50% Decrease in Projected Monetized Capacity Revenues*, and *Lower EE level*. In the Reply Testimonies they filed on November 4, 2009 the Company witnesses did not address the probability or likelihood that actual benefits would be closer to those projected in the alternative case in my Direct Testimony as opposed to the projections in their original Business Case.

Q. PLEASE DESCRIBE THE ADDITIONAL COSTS INCLUDED IN THE UPDATED ALTERNATIVE CASE.

A. The Updated Alternative Case includes an order of magnitude estimate of $100 million in additional costs for some combination of incremental expenditures for In Home Devices ("IHDs"), Communication program expenses and CIS system upgrades. The $100 million is approximately 50 percent of the total for those three categories that Mr. Case discusses on page 26. I recognize the magnitude and ratemaking implications of the $100 million undepreciated value of existing meters noted on page 6 of the Order but did not include that amount in the Updated Alternative Case as I did not have an estimate of the incremental cost implications of the recovery of that amount.

Mr. Case states, at page 26, that the various Business Cases exclude IHD costs because the Company does not propose including IHDs in its project until it can justify that additional expenditure. However, the Company's projections of reductions per participant assume that a significant percentage of residential customers will have "enhanced technology" ("ET"). The cost of ET will be borne by someone, either individual customers or ratepayers in general.

In addition, Mr. Case states that the various Business Cases exclude Communication program costs because the Company already has extensive budget for these efforts and will not incur incremental communication costs due to this project. However, the Company is likely to incur incremental communication costs given the increasing recognition of the importance of communications to the successful deployment and operation of new rates and programs enabled by smart meters (STAFF DR 7-5).

Finally, Mr. Case did not include the Company's estimated cost for a new CIS system because he considers that to be an investment the Company would make absent the Smart Grid Project. Again, it is possible that when the Company invests in a new CIS it will incur some incremental or additional costs to support the project.

Q. PLEASE DESCRIBE THE PROJECTED BENEFITS IN THE UPDATED ALTERNATIVE CASE.

A. The Updated Alternative Case has the same projected benefits as the Company's Updated Business Case for three categories - AMI, Energy Conservation and DOE PeakRewards Grant. The Updated Alternative Case has lower projections for the six categories of benefits driven by peak reductions, i.e., avoided distribution infrastructure, avoided transmission infrastructure, energy price mitigation, energy revenues, capacity price mitigation and capacity revenues. I calculated those lower projections by running BGE's benefits estimation model with 50% lower assumptions for PTR participation and PJM capacity values.

Q. PLEASE SUMMARIZE THE PROJECTED COSTS AND BENEFITS IN THE UPDATED ALTERNATIVE CASE.

A. Table 2, below, compares the Updated Business Case to this alternative case. The details underlying Table 2 are provided in Exhibit___(JRH-12).

Table 2		
	Updated Business Case	**Updated Alternative Case**
Costs		
Capital + O&M	$598	$598
DOE SGIG Grant	(115)	(115)
Incremental costs of IHD, Communication, CIS		$ 100
Total	**$384**	**$484**
Benefits		
Peak reductions by customers	$1,007	$429
Energy Conservation by customers	$129	$129
Distribution System management decisions by BGE	$220	$220
DOE PeakRewards Grant	$61	$61
Total	**$1,417**	**$839**
Benefit to Cost ratio	**3.7**	**1.7**

Q. IS THERE ANY GUARANTEE THAT ACTUAL COSTS AND BENEFITS WILL EQUAL THE PROJECTED COSTS AND BENEFITS IN THE UPDATED ALTERNATIVE CASE?

A. No. As with the Company's Updated Business Case, the costs and benefits in the Updated Alternative Case are projections. Although these projections are based upon more realistic assumptions, at the end of the day there is no guarantee that the actual costs will equal the projected costs or that actual benefits will equal the projected benefits. Thus, there continues to be some degree of financial risk associated with this project.

Q. PLEASE SUMMARIZE YOUR CONCLUSION REGARDING BGE'S UPDATED BUSINESS CASE.

A. My conclusion is that BGE's Updated Business Case is not highly conservative and that it is not a material change from its original Business Case with DOE funding.

The Company states that its Updated Business Case has a TRC benefit to cost ratio of 3.7 and that it is based upon highly conservative assumptions. However, the projection of benefits underlying the Updated Business Case is essentially the same as the projection underlying the original Business Case with DOE funding in two key respects. First, the majority of projected benefits in both cases are based upon the Company's assumption that over 75% of residential customers will respond to the new PTR on a sustained basis for 10 years, which is not a highly conservative assumption. Second, approximately 50% of total projected benefits in both cases hinge on the Company's assumption that reductions in demand will be worth more than $176 per MW/day from 2014 for ten years, which is also not a conservative assumption.

Q. PLEASE SUMMARIZE YOUR CONCLUSION REGARDING THE RISK THAT ACTUAL BENEFITS FROM THE PROPOSED PROJECT MAY BE LESS THAN THE PROJECTED BENEFITS UNDERLYING BGE'S UPDATED BUSINESS CASE.

A. There is a significant risk that actual benefits from the proposed project will be less than the projected benefits underlying BGE's Updated Business Case. This risk is due to the likelihood that actual participation in the PTR will be lower than the Company's projections and that the value of demand reductions in the PJM capacity market will be less than the Company's projections. It also appears that the actual costs of the proposed project will be higher than the projected costs underlying BGE's Updated Business Case due to the incremental costs of in-home devices, customer communications and an upgraded CIS. The TRC ratio of actual benefits and costs is likely to be closer to 1.7 than to the TRC ratio of 3.7 projected for the Updated Business Case.

III. MITIGATION AND ALLOCATION OF FINANCIAL RISK

Q. WHAT DID THE COMMISSION SPECIFY IN ITS ORDER REGARDING MITIGATION AND ALLOCATION OF FINANCIAL RISK ASSOCIATED WITH THIS PROJECT?

A. In its Order, at page 7, the Commission invited BGE to submit an alternative proposal that "…provides a workable methodology by which BGE will mitigate and more fairly allocate between the Company and its customers the risk that the proposal will not provide the benefits underlying BGE's business case, or that it will cost significantly more than BGE currently projects."

Q. PLEASE SUMMARIZE THE COMPANY'S RESPONSE TO THIS INVITATION.

A. Mr. Case discusses the steps the Company has taken to mitigate financial risks to customers on pages 12 through 15 of his Testimony. He describes the three major steps the Company initially took, which were to conduct a pilot, to develop a conservative business case and to apply for a DOE Grant. He then describes, on pages 14 and 15 of his testimony, the steps the Company has taken to further mitigate risk to customers in response to the invitation in the Order. I will comment on two of those steps, the flow through of 100% of benefits from the project to customers and the alignment of benefits and costs customers will see from the project.

<u>Flow Through of Benefits to Customers</u>

Q. PLEASE COMMENT ON THE COMPANY POSITION THAT 100 PERCENT OF THE BENEFITS FROM THE SMART GRID PROJECT ARE SET TO FLOW THROUGH TO CUSTOMERS.

A. Mr. Case states, on page 15, that 100 percent of the benefits from the Smart Grid project are set to flow through to customers. This proposal is not a special step to either mitigate the project's financial risk or to allocate that risk fairly between the Company and its customers.

First, passing 100 percent of the benefits of the project to customers, while earning its authorized rate of return, is consistent with the Company's plan to recover its prudently incurred costs of the project from customers. The Company routinely invests in projects that provides benefits to its customers, i.e., reliable service at reasonable rates, and recovers the prudently incurred costs of those investments from its customers.

Second, it is important to note that the Company is not committing to flow through an amount of benefits equivalent to the amounts projected in its Updated Business Case, or to limit its recovery of costs to the amounts it has projected in that Case. Instead the Company is simply committing to flow through the actual amount of benefits and costs, whatever those amounts may be (Reponses OPC DR8-2, 10-2, 10-5, 10-6, 10-7).

Q. DO YOU AGREE WITH THE COMPANY'S ESTIMATE OF RESIDENTIAL CUSTOMER BILL IMPACTS?

A. No, I believe that actual bill impacts will be higher than the Company's estimates.

Mr. Case presents new estimates of residential customer bill impacts associated with the Updated Business Case on page 29 of his testimony. He presents these impacts as monthly charges for an average residential customer using 1,000 kWh per month before estimated average savings from the project as well as net of those savings. The surcharge underlying his calculation of monthly charges for an average residential customer before estimated average savings consists of three components. The first is the Smart Grid Charge ("SGC"), which collects the cost of the project. Second is the "DOE Impact on PeakRewards Surcharge," which is the reduction in that surcharge due to the DOE grant. Third is the PTR rider, which funds the PTR. The Company assumes that, starting in 2014, the annual revenue from PJM for PTR demand reductions will exceed the annual cost of the PTRs and as a result the PTR rider will be negative, i.e. a refund.

The Company's projection of a negative PTR rider follows from its assumption that the value of demand reductions in the PJM capacity market will exceed $227 per MW-day from 2014 onward. As discussed earlier, I believe that PJM capacity market prices will be much lower and that the annual revenue from PJM for PTR demand reductions will equal the annual cost of the PTRs in the long term.

The implications of excluding the PTR rider from the calculation of bill impacts for an average residential electricity customer are shown in Exhibit___(JRH-14). The major impacts occur from 2015 onward. Under the Company's estimate the monthly charge in 2015 is $0.19 per month and goes negative in subsequent years. Under my estimate the monthly charge in 2015 is $1.18 per month and remains the range of $0.80 to $0.90 per month for several subsequent years

Q. DO YOU HAVE ANY OTHER COMMENTS REGARDING THE PROPOSED PTR RIDER?

A. Yes. I support the Company's proposal to have a separate PTR rider. Further, my understanding is that the Company is proposing, on average, to fund the PTR using revenues it receives from PJM. However the Company is not proposing to limit its funding of the PTR to PJM revenues. For example, in 2013 the Company is proposing to collect $8.5 million from residential customers to help fund the residential PTR rider (OPC DR 10-8 Attachment 1, Residential tab).

I recommend that the Commission require the Company to set the PTR at levels corresponding to the revenues it expects to receive from PJM and to limit the net amount it can collect from ratepayers to fund PTR costs in any year, i.e. net of revenues the Company receives from PJM. A reasonable limit might be 5 percent. In addition the PTR rider should provide for carry-over of under-collections and over-collections from one year to the next.

<u>Alignment of Benefits and Costs.</u>

Q. PLEASE SUMMARIZE THE COMPANY'S PROPOSED CHANGES IN THE ALIGNMENT OF COSTS AND BENEFITS CUSTOMERS WILL SEE FROM THE SMART GRID PROJECT.

A. Mr. Case states that the Company's Updated Business Case improves the alignment of costs and benefits customers will see from the Smart Grid project. In terms of costs the Company is now proposing to start a SGC surcharge in January 2011. In terms of benefits the Company states that its energy portal will be operational in October 2011 and that the PTR will begin in June 2013.

Q. IS IT CLEAR THAT THE COMPANY'S PROPOSED CHANGES REPRESENT A MAJOR IMPROVEMENT IN THE ALIGNMENT OF COSTS AND BENEFITS RESIDENTIAL CUSTOMERS WILL SEE FROM THE SMART GRID PROJECT?

A. No. According to the Company's proposed deployment schedule, the majority, i.e. over 50%, of residential accounts will not have smart meters until June 2013. Therefore, the majority of residential customers will be paying the surcharge for two and half years (January 2011 – June 2013) before they will have the opportunity to benefit from the energy portal and the PTR.

IV. CONCLUSION

Q. DOES THE COMPANY HAVE THE RESPONSIBILITY AND AUTHORITY FOR THE PROJECT'S ACTUAL COSTS AND MOST OF ITS ACTUAL BENEFITS?

A. Yes. First, the Company has the responsibility and authority to control the costs of the project. Second, the Company has the responsibility and authority to achieve the projected savings in its distribution system costs. Third, the Company has the responsibility and authority to design and implement communication and other programs that will motivate its customers to take maximum advantage of the opportunity to achieve savings in their electricity costs from peak reduction and feedback.

Q. PLEASE SUMMARIZE YOUR CONCLUSION REGARDING BGE'S PROPOSALS FOR MITIGATING THE FINANCIAL RISK ASSOCIATED WITH THE PROJECT AND FOR ALLOCATING THAT RISK BETWEEN THE COMPANY AND ITS CUSTOMERS.

A. There continues to be a financial risk that the project's actual benefits will not exceed its actual costs. BGE has not proposed a material change in the allocation of that risk between itself and its customers.

The Company is proposing to fund its PTR with revenues it would receive from PJM and to supplement that amount, if and when necessary, with revenues it would collect from ratepayers. The Company has not proposed any limit on the revenues it would collect from ratepayers to fund the PTR.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS BASED UPON THOSE CONCLUSIONS.

A. Based upon these conclusions I recommend that the Commission take the financial risk associated with the project into consideration when making its decision as to whether to approve or reject the Company's revised request. If the Commission does approve the Initiative, I recommend that it take this financial risk into consideration when deciding upon the method of cost recovery, as discussed by Mr. Effron.

If the Commission approves the Company proposed PTR rider I recommend that the Commission require the Company to limit the net amount it can collect from ratepayers to fund PTR costs in any year, i.e. net of revenues the Company receives from PJM.

Q. DOES THIS CONCLUDE YOUR REPLY TESTIMONY?

A. Yes.

BGE Smart Grid Initiative - Summary of Projected Total Costs and Benefits

BGE Business Cases versus Synapse Alternative Cases

Costs & Benefits		ORIGINAL BUSINESS CASE, no DOE $ (1)		ORIGINAL SENSITIVITY CASE (2) 39% PTR Participation + low Capacity Value + 0.6% Energy Conservation		UPDATED BUSINESS CASE (includes DOE $) (3)		UPDATED ALTERNATIVE / SENSITIVITY CASE (4) Updated Costs + IHDs and Communication with 39% PTR Participation and lower Capacity Value	
$'s in Millions		NPV millions		NPV millions		NPV millions		NPV millions	
Costs	Category								
	Capital Expenditures	$ 434		$ 434		$ 415		$ 415	
	Operations & Maintenance Expenses	$ 95		$ 95		$ 83		$ 83	
	Funding from DOE	$ -		$ -		$ (115)		($115)	
	IHDs + Communication							100	
	Total Costs	**$ 529**		**$ 529**		**$ 384**		**$ 484**	
BENEFITS		NPV millions	% of Benefits	NPV millions	% of Benefits	NPV millions	% of Benefits	NPV millions	% of Benefits
Primary Driver	Category								
AMI	Distribution O&M Savings	$ 155		$ 155		$ 123		$ 123	
	Avoided Meter Related Capital	$ 112		$ 112		$ 96		$ 96	
	Sub-total AMI	$ 267	21%	$ 267	37%	$ 220	**15%**	$ 220	**26%**
						$ -		$ -	
SEP	Energy Conservation	$ 190	15%	$ 114	16%	$ 129	**9%**	$ 129	**15%**
	Peak reduction								
	Avoided Distribution Infrastructure	$ 34		$ 17		$ 44		$ 22	
	Avoided Transmission Infrastructure	$ 82		$ 41		$ 106		$ 53	
	Energy Price Mitigation	$ 69		$ 34		$ 90		$ 45	
	Energy Revenues	$ 26		$ 13		$ 13		$ 7	
	Capacity Price Mitigation	$ 335		$ 167		$ 444		$ 222	
	Capacity Revenues	$ 264		$ 66		$ 310		$ 80	
	Sub-total from Peak Reduction	$ 809	64%	$ 338	47%	$ 1,007	**71%**	$ 429	**51%**
	DOE Grant Benefit					**$ 61**	**4%**	**$ 61**	**7%**
Total Benefits		**$ 1,266**	100%	**$ 719**	100%	**$ 1,417**	**100%**	**$ 839**	**100%**
Benefit / Cost Ratios									
	AMI Benefit/ Cost Ratio	0.5		0.5		0.6		0.5	
	SEP, Conservation & DOE grant Benefit/ Cost Rat	1.9		0.9		3.1		1.3	
	Total Benefit/ Cost Ratio	**2.4**		**1.4**		**3.7**		**1.7**	

Sources:

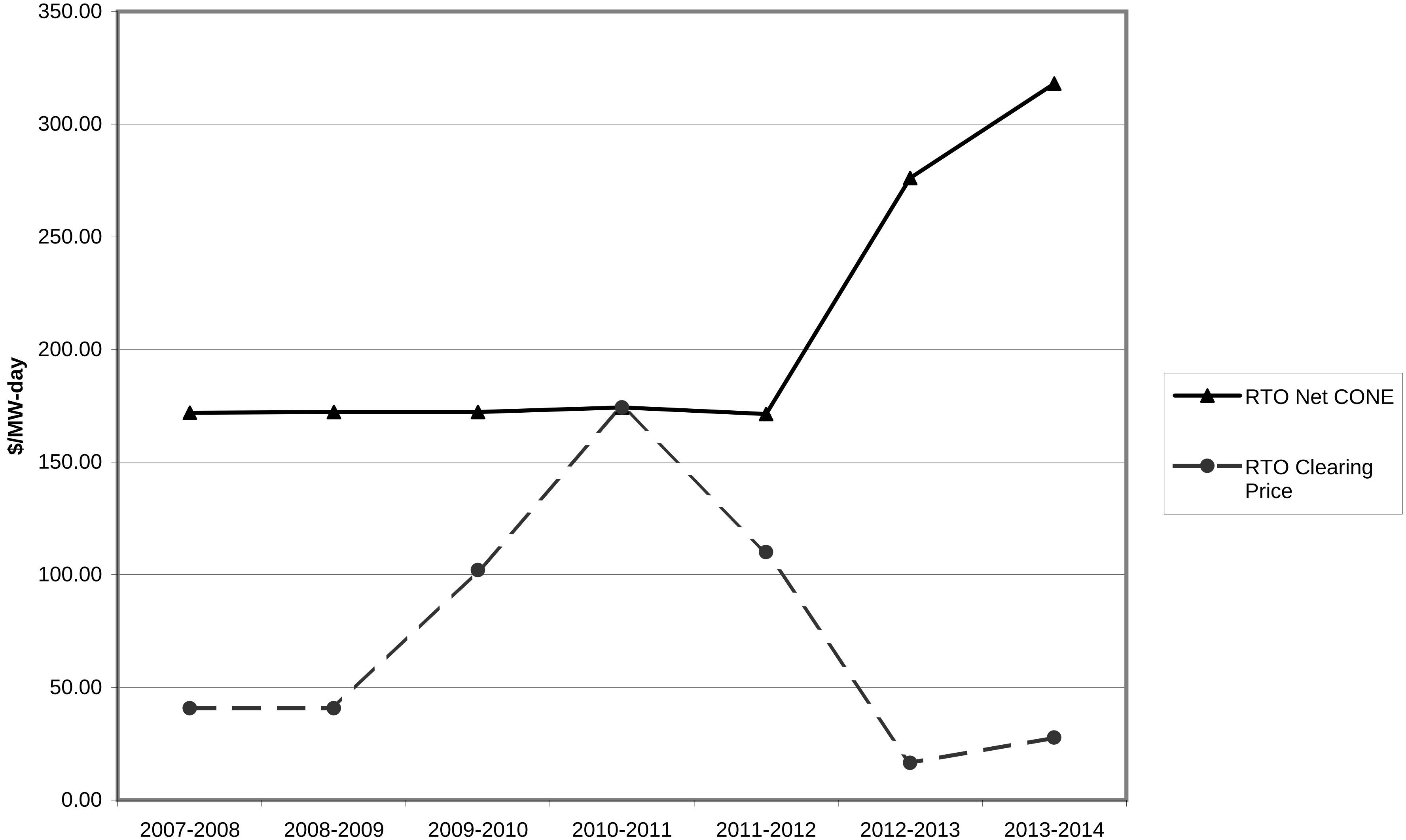
1 BGE Response to Staff IR2-19, Staff-BGEIR2-19_Attachment 1, Tab 'Base'

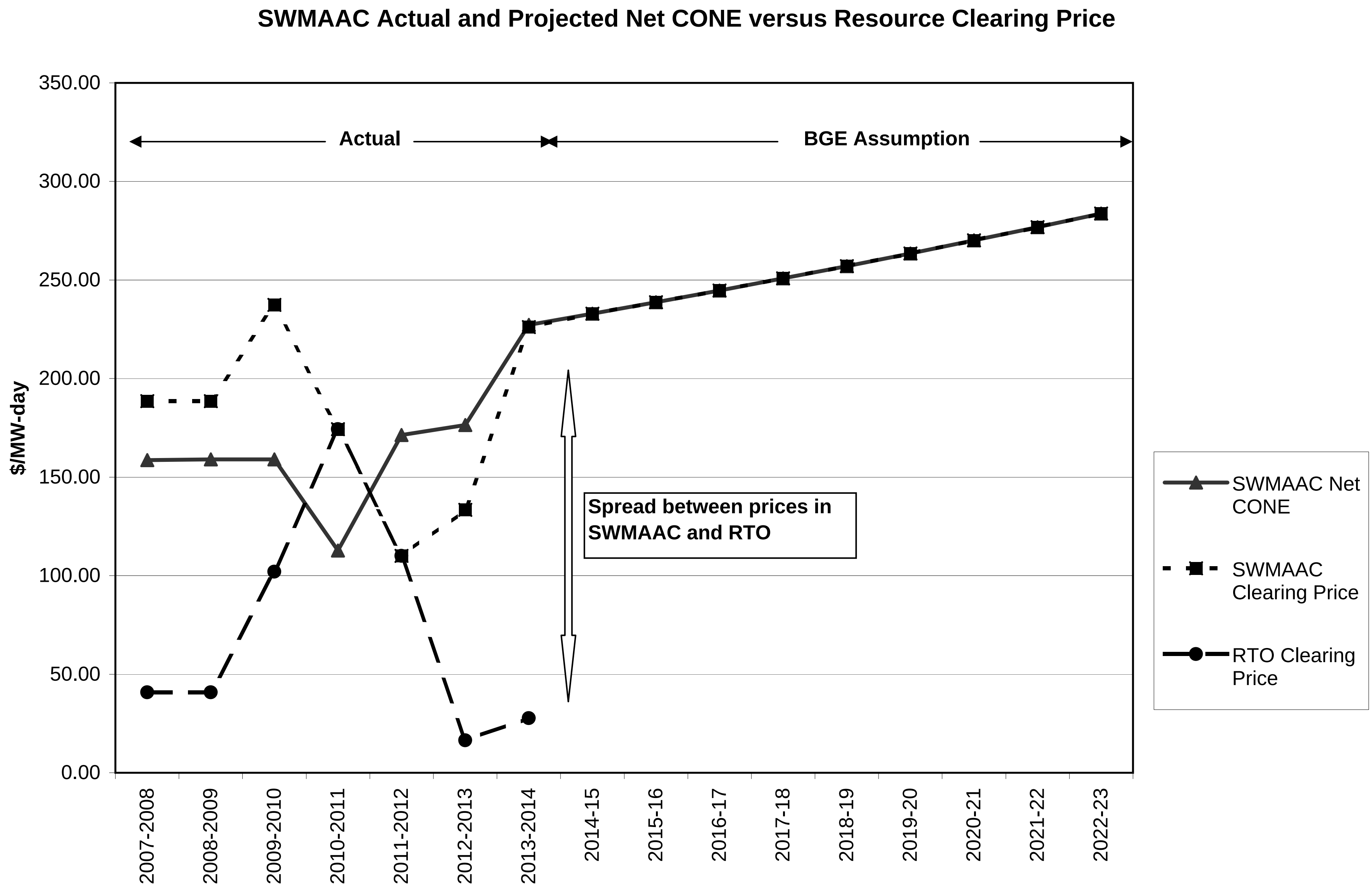
2 Workbook A to Exhibits___JRH-4 and 7

3 BGE Response to Staff DR 8 - 1 Attachment 2, Tab 'Base'

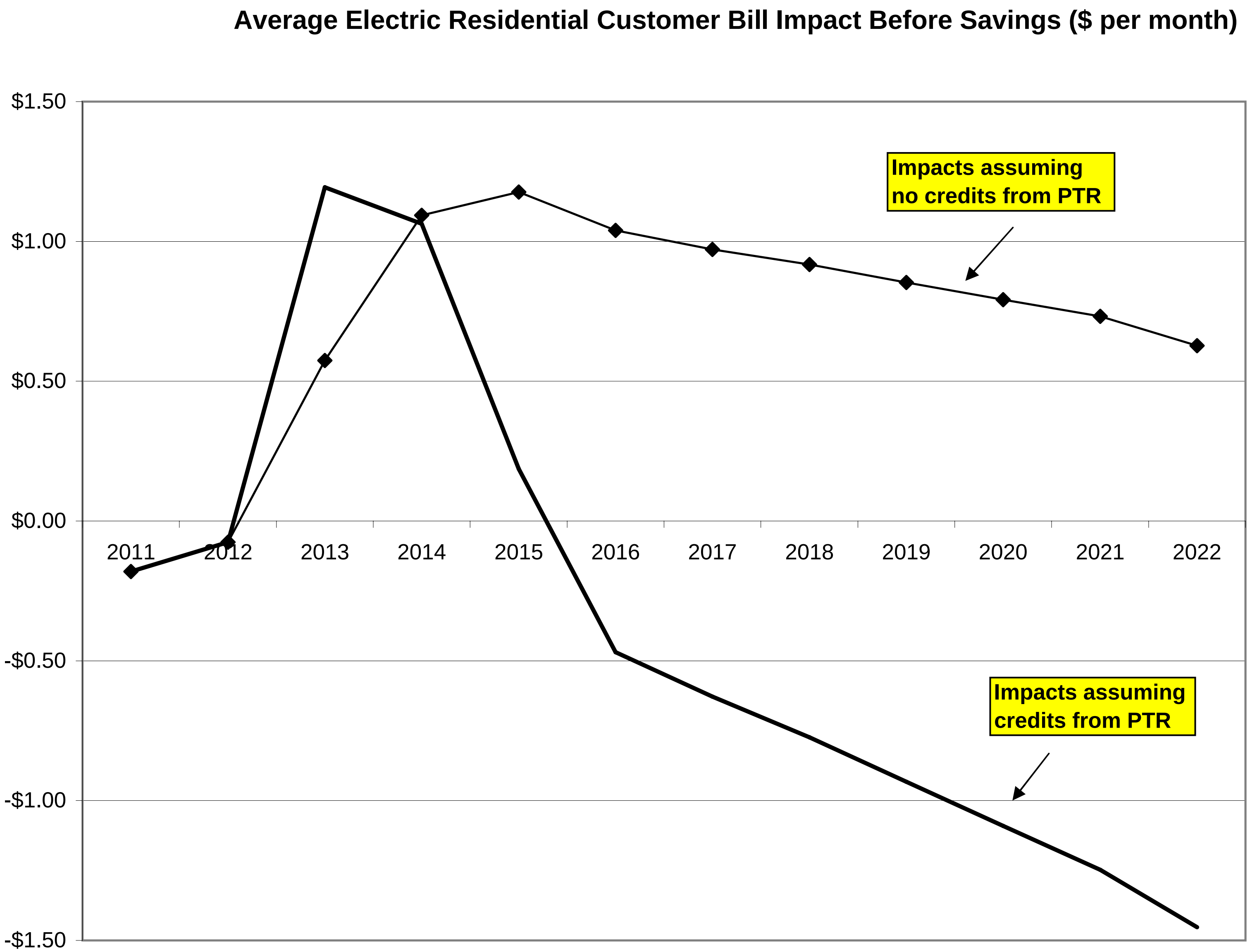
4 workbook *:* 50% run of Staff DR 8 -1 Confidential Attachment 1.xls

RTO Actual Net CONE versus Resource Clearing Price




SWMAAC Actual and Projected Net CONE versus Resource Clearing Price
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
$/MW-day
Actual
BGE Assumption
Spread between prices in SWMAAC and RTO
2007-2008
2008-2009
2009-2010
2010-2011
2011-2012
2012-2013
2013-2014
2014-15
2015-16
2016-17
2017-18
2018-19
2019-20
2020-21
2021-22
2022-23
SWMAAC Net CONE
SWMAAC Clearing Price
RTO Clearing Price

Exhibit___(JRH-14)



BGE Responses to Selected Data Requests

Staff DR 7-5

OPC DR 10-2

OPC DR 10-4

OPC DR 10-5

OPC DR 10-6

OPC DR 10 - 7

Item No.: STAFF DR7-5

What is the total expenditure that BGE estimates to spend on its Customer Communication Plan, as filed on July 12, 2010?

RESPONSE:

The cost associated with the *Smart Grid Customer Education and Communication Plan* is approximately $66M through 2024. This includes general customer education and awareness, a web portal accessible through PCs and mobile devices, and mass notification of critical peak events (via e-mail, SMS and automated phone calls).

Realizing that the first few years of deployment will be critical to the customer education effort, BGE intends to spend about $7.8M annually from 2011 through 2014 (the period in which all residential and small commercial gas and electric meters will be upgraded). Thereafter, BGE intends to spend about $3.4M annually (2015 through 2024). Of course, BGE will begin education efforts immediately following Commission approval.

Case No. 9208
Baltimore Gas and Electric Company
Response to OPC Data Request No. 10 (On Rehearing)
July 19, 2010

Item No.: OPC DR10-2

Mitigating Risk of Actual *Costs* higher than Projected Costs. The Commission has "invited" BGE to submit an alternative proposal that mitigates the risk that the proposal will cost significantly more than BGE currently projects, Order No. 83410, pp. 7-8. In its Application for Rehearing the Company has presented the reasons why it considers the technology risks to be sufficiently mitigated, Section C, pp. 12 -13, and its Business Case to be highly positive even if other costs are included, Section F, pp. 19-20.

a. In this specific regard, is it the Company's contention that there is no need to address this issue through a modified or alternative proposal because its Business Case is so robust that it would remain positive even if actual costs were $900 million higher than projected on an NPV basis? Please begin your response with a "yes," "no" or "cannot answer yes or no."

b. In this specific regard, is it the Company's contention that there is no need to address this issue through a modified or alternative proposal because BGE will use proven technology and/or BGE has minimized the risk of technology obsolescence? Please begin your response with a "yes," "no" or "cannot answer yes or no."

c. If your response to OPC DR 10-2.a. and/or OPC DR 10-2.b. above is either "no" or "cannot answer yes or no," please explain your response with reasonable specificity.

RESPONSE:

a. No. It is BGE's contention that customers should be responsible for all of the prudently incurred costs to implement Smart Grid, as customers are also the beneficiaries of all of the benefits of Smart Grid. If the prudently incurred costs are higher than currently projected, BGE believes customers should be responsible for those costs. Conversely, if the prudently incurred costs are lower than currently projected, BGE proposes that customers should benefit from those savings. The most significant reduction in the costs comes from the $200 million DOE grant which BGE secured for the benefit of its customers. This grant lowers the costs to residential customers by 79%.

b. No. See answer to item a. BGE does believe, however, that it has minimized the risks of the project through the use of proven technology and by its efforts in developing favorable contract terms with its Smart Grid vendors.

c. See items 1a and 1b above.

Case No. 9208
Baltimore Gas and Electric Company
Response to OPC Data Request No. 10 (On Rehearing)
July 19, 2010

Item No.: OPC DR10-4

Allocating Risk of Actual Benefits less than Projected Benefits. In its Application for Rehearing, the Company notes that the PJM capacity values for the BGE zone for the 2013-2014 delivery year are 70 percent higher than in the prior year.

a. Please provide the PJM capacity value for the BGE zone for the 2013-2014 delivery year.

b. Please provide the projected PJM capacity value for the BGE zone for the 2013-2014 delivery year that BGE assumes in its Business Case.

c. Please provide the PJM projected capacity values for the BGE zone for each delivery year from 2014-2015 onward that BGE assumes in its Business Case.

d. Beginning your answer with a "yes," "no" or "cannot answer yes or no," is BGE proposing to accept all or any portion of the financial risk that actual PJM capacity values for the BGE zone for each delivery year from 2014-2015 onward may be less than the values BGE assumed in its Business Case?

    i. If your answer is either "no" or "cannot answer yes or no" to OPC DR 10-4.d. immediately above, please provide with reasonable specificity all reasons that support and explain your response.

e. Please provide the most recent forecast of PJM capacity values for the BGE zone for each delivery year from 2014-2015 onward in BGE's possession, custody or control, regardless of the identity of the person or business entity that created or prepared it.

RESPONSE:

a. $226.15 per MWday.

b. The capacity price for the 2013-14 delivery year is known, therefore a projected value was not necessary. BGE used the known cleared price of $226.15 per MWday in our revised business case. Our original business case used a value of $180.85 per MWday for the 2013-14 delivery year, based on the 2012-13 Net CONE, which is approximately 30% lower than the 2013-14 Net CONE.

a. The value of capacity assumed in BGE's revised business case subsequent to the 2013-14 delivery year is constant in real dollars at a price equal to the 2013-14 Net CONE price of $227.20 per MWday. The nominal rate of inflation is assumed to be 2.5%.

b. No. Under BGE's proposal, customers receive 100% of the benefits of Smart Grid. As

Case No. 9208
Baltimore Gas and Electric Company
Response to OPC Data Request No. 10 (On Rehearing)
July 19, 2010

detailed in our proposal, these benefits are extensive. If, however, a particular benefit stream, including capacity revenues, in total or in any given year is less than projected, it reduces the overall $2.5 billion estimated level of savings. Conversely, if a benefit stream is higher than projected, that increases the overall $2.5 billion in estimated savings. Given the substantial difference between projected savings and costs to customers (i.e., 23 to 1 ratio for residentials), BGE submits that there is ample risk mitigation to customers.

c. Other than what BGE has included in its business case for the value of capacity (see item 4c), BGE is not in possession of any forecast of PJM capacity values.

Case No. 9208
Baltimore Gas and Electric Company
Response to OPC Data Request No. 10 (On Rehearing)
July 19, 2010

Item No.: OPC DR10-5

Allocating Risk of Actual Benefits less than Projected Benefits. The Commission has "invited" BGE to submit an alternative proposal that more fairly allocates, between the Company and its customers, the risk that the proposal will not provide the benefits underlying BGE's business case, Order No. 83410, pp. 7-8.

a. For purposes of setting revenue requirements in the first base rate case after full deployment under the Company's proposed modified cost recovery proposal, is BGE proposing to reflect reductions in distribution system capital and operating costs that are the greater of its actual reductions or the reductions it projected in its Business Case? Please begin your response with either a "yes," "no" or "cannot answer yes or no".

    i. If your answer is either "no" or "cannot answer yes or no" to OPC DR 10-5.a. immediately above, please provide with reasonable specificity all reasons that support and explain your response.

<u>RESPONSE</u>:

a. No. See item 4d.

Case No. 9208
Baltimore Gas and Electric Company
Response to OPC Data Request No. 10 (On Rehearing)
July 19, 2010

Item No.: OPC DR10-6

Allocating Risk of Actual Costs higher than Projected Costs. The Commission has "invited" BGE to submit an alternative proposal that more fairly allocates, between the Company and its customers, the risk that the proposal will cost significantly more than BGE currently projects, Order No. 83410, pp. 7-8.

a. In this specific regard, please indicate the section(s) of the Application for Rehearing in which the Company responds to this particular invitation, along with an explanation for *how* each such section will allocate the risk that the Company's proposal, if put into effect, will cost significantly more than the Company currently projects?

b. In this specific regard, if in its Request for Rehearing the Company has not responded to this particular invitation, please provide with reasonable specificity all of the reasons for the Company's declination of the Commission's invitation.

<u>RESPONSE</u>:

a. See items 2a and 2b.

b. See items 2a and 2b.

Case No. 9208
Baltimore Gas and Electric Company
Response to OPC Data Request No. 10 (On Rehearing)
July 19, 2010

Item No.: OPC DR10-7

Allocating Risk of Actual Costs higher than Projected Costs. The Commission has invited BGE to submit an alternative proposal that more fairly allocates, between the Company and its customers, the risk that the proposal will cost significantly more than BGE currently projects, Order No. 83410, pp. 7-8.

a. For purposes of setting revenue requirements to be recovered under its proposed modified cost recovery proposal, is BGE proposing to project capital and operating costs that are the lesser of its actual costs or the costs it projected in its Business Case? Please begin your response with either a "yes," "no" or "cannot answer yes or no."

   i. If your answer is either "no" or "cannot answer yes or no" to OPC DR 10-7.a. immediately above, please provide with reasonable specificity all reasons that support and explain your response.

<u>RESPONSE</u>:

a. See items 2a and 2b.