UTILITY COMMITTEE

The Utility Committee Meeting was held on November 25, 2013 at 5:00 p.m. with Mr. Slavin presiding until the arrival of Chairwoman Williams (5:03 p.m.). Members present were Mr. Perza (arrived at 5:07 p.m.), Mr. Blakeman, and Mr. Snaman. Members of Council present were Mr. Dixon (arrived at 5:09 p.m.) and Mr. Hutchison. Mayor Carey was also present.

AGENDA ADDITIONS/DELETIONS

Mr. Blakeman moved for approval of the agenda as presented, seconded by Mr. Snaman and unanimously carried.

Electric Supply & Generation

Members were provided information regarding Electric Supply and Generation, as follows:

McKee Run Units 1 & 2 - Cost/Benefit Analysis

Mr. Scott Koenig, City Manager, reviewed a Presentation - Cost/Benefit Analysis for City of Dover for McKee Run Units 1 & 2, as prepared by Mr. Robert Trinnear, The Energy Authority (TEA).

Referring to Slide 13, Mr. Blakeman questioned if there were a means of quantifying the risk of operational failure. Responding, Mr. Koenig stated that he would contact representatives of both TEA and North American Energy Services (NAES) to obtain this information.

In response to Mr. Blakeman with reference to Slide 14, Mr. Koenig stated that borescope inspection logs did not indicate any required repairs and/or improvements that were not already included in the City's Capital Improvement Plan (CIP). Based on current knowledge, he assured members that the only repairs and/or improvements anticipated were those listed in the CIP.

Responding to Mrs. Williams regarding the cost of "mothballing" these Units, Mr. Koenig stated that TEA and NAES had been requested to provide a price; however, staff anticipated that this amount would be costly (in the high six to low seven figure range) due to asbestos and other issues associated with the Units.

Mr. Snaman questioned if the new power plant (Calpine) could affect the details regarding Units 1 and 2. Responding, Mr. Koenig explained that if the City entered into a purchase power agreement with Calpine, the City could replace the capacity of Units 1 and 2 with capacity from the Calpine Project, which would be a negotiated item and was scheduled for discussion later in the meeting, under Item #1C.

Mrs. Williams relayed concern with proceeding since there were so many uncertainties.

Mr. Kirk Betts, Betts & Holt LLP, the City's Energy Attorney, stated that there was not as much uncertainty as there appeared to be but there were several risks. He explained that some life extensions were previously done to Units 1 and 2 to keep them "alive;" however, prior to the Calpine project, the lease arrangement at the Garrison Tract included the opportunity to purchase 50 MW of capacity based on the belief that Units 1 and 2 would not survive. He stated that the Units are not as reliable as needed, which poses a risk. When the Units are supposed to come up and they do not, the City is penalized financially as well as with regard to reserve requirements and does not get the capacity credits needed. While these costs have not yet been quantified, they exist. He advised

members that another risk was the capacity price of $119 per megawatt day (MWd) which was expected to be in the range of $150, $180, and $200 per MWd, but noted that this was not fully quantified because the PJM market only extends out three (3) years. He explained that this type of spread reduces the value of the plant and, with the addition of the costs for operating those Units including the NAES costs and the capital costs indicated in the CIP, there is a very low margin. With a low margin area of approximately $250,000, for example, the City would be totally at risk and one (1) or more operational failure or forced outage could result in the City being "in the hole." While these numbers had not been quantified, he explained that they appear more and more threatening in terms of the value of the plant.

Mr. Betts explained that another issue with old units such as these is that spare parts are not available and must be manufactured. He explained that manufacturing parts for an antique piece of equipment costs more and the value is not recovered; therefore, the cost just to repair Units 1 and 2 would be extraordinarily high. He reminded members that Units 1 and 2 were being kept for capacity plays, and when the capacity market goes down, the value disappears. Although the City does not need the Units for energy, they must be able to operate. He noted that the heat rate for these Units is very high, at least 13,000 btu's per kilowatt hour, whereas the competing Calpine unit is approximately half of that. Therefore, the Units are a non-competitive resource that the City pays a lot of money for in order to have capacity and the value is continuously decreasing. While not fully quantified, these are the real risks involved with these two (2) Units.

Responding to Mrs. Williams, Mr. Betts explained that maintenance for Units 1 and 2 should have been done gradually over time but was deferred in previous years to avoid the additional capital cost, which is the reason for the major $2.4M "hit" in budget for Fiscal Year 2018. He stated that the capacity market has dropped significantly, and the PJM capacity market has many components. He advised members that Converge, an Arrow Electronic Company, has been working, primarily with refrigeration, to find ways to replace capacity in the marketplace by allowing customers to go offline for a couple of minutes at a time. In the past, customers had generation in reserve or brought up generation to meet the voltage requirements; however, since customers are able to meter the load precisely and changes are computerized, they are able to go offline and reduce load instead of bringing capacity on. He stated that last summer in this region, more than 1,000 MW(the amount of a nuclear plant) were taken offline voluntarily by customers who received a notice the day before indicating if they went offline the next day between certain hours, they would be compensated a certain amount per kilowatt hour not used, which had a huge impact on the marketplace. The current market is very different and continuously changing; therefore, the way in which customers invest and adapt to the changes are also different. Mr. Betts expressed his opinion that the market is not fixed but in some areas it is very tight; for example, in New Jersey the current capacity price is almost $300 per MWd, whereas in Dover it has dropped. He explained that the Garrison Plant's 300 MW has a huge impact on costs on the Delmarva Peninsula because it is gas operated, fast, has relatively low personnel costs, and can bid into the market very aggressively.

In regard to transmission costs, Mr. Betts explained that there has been a huge amount of transmission expansion in PJM, which has resulted in a reduction of the number of power plants constructed. It is a very dynamic market and, with 13,000 heat rate units, the City must consider whether, even if investment were made in Units 1 and 2, there would be value going forward and how much value that investment would have in the next five (5) to 10 years.

Mrs. Donna Mitchell, Controller/Treasurer, advised members that the 2016/2017 forecast was completed last May and, at that time, the capacity price was $193 per MWd. The price was now at $119 per MWd; therefore, she stated that the capacity revenue would change accordingly. She noted that a leak on a gasket on Unit 1 had to be repaired last year and the costs were over budget. In addition, she expressed concern regarding costs involving Unit 3. She stated that it had been borescoped and will be opened up for repair. This was scheduled as a three (3) year project which started with a $1.21M budget for the turbine repair and generator; however, the bids received for the turbine were excessive, so the generator was done separately at a cost of $276,000. The costs for the turbine repairs for Unit 3 were currently up to $1.6M, and she noted that when it is opened, additional repairs may be required which would increase the costs.

In response to Mr. Perza, Mrs. Mitchell stated that staff's recommendation would not include bidding Units 1 and 2 in the PJM market beyond Fiscal Year 2017 since staff anticipated a joint agreement with Calpine or another capacity agreement to pick up 34 MW. She confirmed that it was staff's recommendation not to fund capital improvements to bring the Units up to current standards and not to fund these Units beyond the next three (3) years. If the Units began to fail in the next year or two (2), she stated that the City would have the option to pull the Units out of the PJM market instead of investing capital into them; however, the City would have to pay for the capacity and pay a forced outage penalty if the Units went down when scheduled to run. In order to meet the December 1, 2013 deadline, it was staff's plan to bid the Units into the capacity auction for the 2017/2018 planning year at $311per MWd to ensure they do not get called on and the City recoups the money, as recommended by TEA.

Noting that the City was obligated to keep Units 1 and 2 operating since they have been included in the auction for the next couple of years, Mr. Slavin questioned if the Units would be revenue positive to the City based on the assumption that the market does not completely bottom out on the capacity side. Responding, Mrs. Mitchell confirmed that they would be revenue positive through Fiscal Year 2017 based on the analysis. She indicated that if the Units were unavailable to run when required, the City would be able to decide whether or not to pay for repairs at that time.

Mr. Slavin questioned the net effect on the City's revenue if it was decided not to keep Units 1 and 2 online beyond 2018. In response, Mrs. Mitchell stated that staff had only forecasted out to the 2018 PJM year; however, according to Mr. Betts, the replacement capacity costs would define whether the City was "in the money or not" for those Units.

Responding to Mr. Blakeman, Mrs. Mitchell referred to the projected incremental operating costs indicated on Page 19 of the presentation and indicated her opinion that the $1M amount could decrease more since staff was currently negotiating contracts.

Staff recommended, for the short term, that Units 1 and 2 not be offered into PJM's capacity auction for the 2017/18 delivery year; that a comprehensive analysis be performed that lays out all the decision options for the City of Dover; that a similar analysis on other parts of the generation portfolio be completed; and that all supply options be surveyed, including new generation projects in and around Dover and Power Purchase Agreement (PPA) opportunities.

Mr. Perza questioned the future impact on revenues if these Units are shut down, irrespective of how much it would cost to get the turbines up and running, and how members could make an assessment and final decision regarding this matter if staff had not planned beyond 2017. Responding, Mrs. Mitchell stated that one (1) of the factors to consider in determining whether the Units should be shut down or not would be the capacity auction, as well as the figures received from TEA. She noted that if the City can obtain the capacity cheaper from Calpine, it may not be advantageous to keep Units 1 and 2 running. Elaborating, Mr. Betts indicated that there were a lot of "moving pieces," one (1) of which was the renegotiation of the NAES Agreement, which may lower operating costs. The other was whether the City would be able to have Garrison or some other entity buy replacement capacity, noting that if the City were able to obtain a longer-term offer, it would provide a benchmark price to compare with the cost to operate the Units. Both of these were on a relatively "fast track," which would allow for a longer-term budget analysis for members to review.

Mr. Betts stated that it is an imperfect system. In a dynamic market, no one knows what the energy prices will be in four (4) years, but the hope is that energy will still be consumed at a consistent rate. It is known that the capacity market is changing, so staff, including himself, must consider the best case, examine the alternatives of keeping the Units running, and make projections based on historic costs versus replacement capacity. It was his opinion that this would be the basis for the estimate built into the City's overall operating budget for the utility.

Mrs. Williams questioned whether Mr. Betts had any concern regarding negotiating an agreement with Calpine since the City incurred great expense and gave land to them. Responding, Mr. Betts stated that he and staff would do their best to hold Calpine to the terms of the contract, which provided for at least 50 MW at a cost that was established as the actual construction costs less the development costs. If Calpine is willing to abide by the contract terms, he believed there could be an opportunity for negotiation that may be favorable for the City. As a competitive strategy, he stated that the City should also consider other available capacity. He stated that the City not only offered the benefit of the land provided to Calpine but can also provide constant cash flow, which they cannot necessarily get from PJM. He also suggested that the City use its monopoly power as a water supplier to encourage negotiation.

In response to Mrs. Williams, Mr. Betts confirmed that Calpine does not have internal "inside the fence" capacity, which could also effect negotiations. Mr. Betts advised members to consider the cost and value of the City's reliability to "island" the City, notwithstanding occurrences in the region. He stressed the importance of the comprehensive analysis proposed by TEA, and that consideration be given to the reasons the City is in the municipal utility business, including reliability, costs, and the attractiveness of the City to outside potential buyers. He stressed that reliability is critical and if it were desired to bring in a data center, as was discussed in previous years, reliability must be at 99.9%. He stated that, with PJM, there had been huge investments in transmission that was not in existence 10 years ago. He noted that there are many rules that apply to the City, in regard to reliability under requirements with PJM and this zone, that have federal implications. The current environment for reliability is very different than it was 10 - 15 years ago, which should be taken into account when considering pricing and value for internal versus external generation.

In response to Mr. Perza, Mr. Koenig stated that, to his knowledge, the City had not had a negative cash flow similar to what was projected for Fiscal Year 2017/2018 since contracting with PACE, approximately 15 years ago.

Responding to Mr. Perza, Mr. Koenig stated that the Units would last as long as the City would be willing to invest in maintenance, which would depend upon economic feasibility. It was staff's opinion that, at this point, maintaining the Units would probably not be in the City's best interest financially. Mr. Blakeman stated that prior to his retirement from the City of Dover, approximately 10 years ago, all similar units that were built in 1962 had been retired.

Mr. Betts suggested that a comparison of the costs to operate the Units (capital, operating, and gas) with the amount purchased through the PJM power grid or TEA, would provide an indication as to whether the Units should be maintained or not. He suggested that TEA be requested to provide this information to members for their consideration in making a determination.

Mr. Blakeman moved to recommend approval of staff's recommendations that, for the short term, Units 1 and 2 not be offered into PJM's capacity auction for the 2017/18 delivery year; that a comprehensive analysis be performed that lays out all the decision options for the City of Dover; that a similar analysis on other parts of the generation portfolio be completed; and that all supply options be surveyed, including new generation projects in and around Dover and Power Purchase Agreement (PPA) opportunities. The motion was seconded by Mr. Snaman and unanimously carried.

[City Clerk's Office Note: Subsequent to the meeting, members were provided a memorandum dated December 4, 2013, from Donna Mitchell, Controller Treasurer - Response to Questions, Utility Committee Meeting November 25, 2013, relating to this matter, as well as an Outage Status Report - Week 9, dated November 27, 2013 ***(Attachment #1)****.]*

VanSant Generating Station Capacity Increase - Cost/Benefit Analysis

Mr. Scott Koenig, City Manager, reviewed a Presentation - Cost/Benefit Analysis for City of Dover - Update on VanSant Generating Station Capacity Increase.

Staff recommended that staff be authorized to continue to proceed with project implementation and reassess economics after bids for project installation are received and before submitting an offer into PJM for the 2017/18 capacity auction on May 12, 2014, noting that PJM must be notified of intent to bid in Units 1 & 2 by March 1, 2014.

Mr. Blakeman questioned whether staff had considered installing a waste heat recovery boiler to create a combined cycle unit. Responding, Mr. Koenig stated that it had been discussed previously; however, it was not included in the most recent reviews. He speculated that there must have been a technical or regulatory issue associated with it.

Responding to Mrs. Williams regarding the Indian River Coal Plant, Mr. Koenig stated that it will have an effect on the market, which may have an indirect effect on the City; however, he was not aware of the time frame.

Mr. Slavin moved to recommend approval of staff's recommendation, seconded by Mr. Snaman and unanimously carried.

[City Clerk's Office Note: Subsequent to the meeting, members were provided a memorandum dated December 4, 2013, from Donna Mitchell, Controller Treasurer - Response to Questions, Utility Committee Meeting November 25, 2013, relating to this matter, as well as an Outage Status Report - Week 9, dated November 27, 2013 ***(Attachment #1)****.]*

Purchase Power Agreement - Calpine

Mr. Scott Koenig, City Manager, advised members that staff intends to seek the assistance of Mr. Kirk Betts, Betts & Holt LLP, the City's Energy Attorney, for discussions regarding a mutually beneficial contract arrangement for the potential Power Purchase Agreement (PPA) with Calpine. He stated that this information was provided for informational purposes only and that no further action was required at this time.

Discussion - Joint Agreement with the Delaware Municipal Electric Corporation (DEMEC) for New Generation

Mr. Scott Koenig, City Manager, explained that as a part of staff's due diligence to examine the possibilities for replacing the capacity of Units 1 and 2, should they be taken out of service, staff intends to meet with the Delaware Municipal Electric Corporation (DEMEC) and/or another partner they may have, to discuss the potential for joint projects, such as capacity improvements, provided a Purchase Power Agreement (PPA) with Calpine cannot be arranged. He stated his preference for keeping the City's options open moving forward and that he will keep Council updated in regard to all discussions.

In response to Mr. Blakeman, Mr. Koenig stated that staff would complete financial analyses on all of the available options, and the potential for DEMEC to own part of the City's units would be open for discussion.

Mr. Koenig stated that this information was provided for informational purposes only and that no further action was required at this time.

Mr. Blakeman moved for adjournment, seconded by Mr. Snaman and unanimously carried.

Meeting adjourned at 5:57 p.m.

Beverly C. Williams
Chairwoman

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Attachment

Attachment #1 - Memorandum dated December 4, 2013, from Donna Mitchell, Controller Treasurer - "Response to Questions, Utility Committee Meeting November 25, 2013" and Outage Status Report - Week 9 - November 27, 2013

City of Dover
Finance Department
PO Box 475
Dover DE 19903-0475
Phone: (302-736-7018
FAX: (302) 736-7177
E-Mail: dmitchell @dover.de.us

MEMORANDUM

To: Members of City Council & Utility Committee

From: Donna Mitchell, Controller/Treasurer

Copy: Mayor, City Manager, & City Clerk

Date: December 4, 2013

Subject: Response to Questions – Utility Committee Meeting November 25, 2013

Please note the responses to the questions asked during the Utility Committee Meeting of November 25, 2013 regarding McKee Run Units 1 & 2 and the VanSant Capacity increase project.

McKee Run Units 1 & 2

1. Referring to Slide 13, Mr. Blakeman questioned if there were a means of quantifying the risk of operational failure.
   In speaking with Mr. Vince Scire, it would be very difficult to quantify the risk of operational failure. There is a lot of unknowns. You could hire consultants to try and determine the dollar amount; however it would be from a 50,000 foot level.

2. In response to Mr. Blakeman with reference to Slide 14, Mr. Koenig stated that bore scope inspection logs did not indicate any required repairs and/or improvements that were not already included in the City's Capital Improvement Plan (CIP).
   All Units have been bore scoped. Units 1 & 2 were completed two years ago. At that time the bore scope showed significant damage in the 1st stage blades of the turbine. The bore scope only goes to the 1st stage. Mr. Scire does not know what to expect if we open up the units in the other sections. Another bore scope is scheduled for this fiscal year and $105,000 has been budgeted for Units 1 & 2 maintenance of which $80,000 is for the bore scope. (See project EG1415 Units 1 & 2 component repairs in the approved CIP) Mr. Scire has held off starting the project waiting on the City's decision on Units 1 & 2. Major overhauls were moved out to FY18 awaiting the updated analysis. Mr. Scire agreed to send us a copy of the consultant's last report.

   I asked Mr. Scire about the asbestos in the units, and he explained there is a lot of asbestos in the boiler and piping. He also explained the instruments contain mercury. The stacks would need to come down if we no longer maintain them, to keep them from becoming a hazard. As indicated during the meeting we have asked TEA to provide us with decommissioning cost. Mr. Scire has several ideas of how this can be done in stages over several years or as a major project. The first method would probably mean keeping a greater number of staff on board than would be needed if this was done as a major project. However, the alternatives can be considered by TEA in their analysis to determine which would be the best approach.

Mr. Scire also mentioned there is value in the permit for the emissions on the 34 megawatts of these two units and that could be used in contract negotiations with other suppliers. These suggestions have been communicated to Mr. Betts and TEA.

VanSant Capacity Increase

3. Mr. Blakeman questioned whether staff had considered installing a waste heat recovery boiler to create a combined cycle unit. Responding, Mr. Koenig stated that it had been discussed previously; however, it was not included in the most recent reviews.
This concept was analyzed during our contract with PACE Global. We reviewed upgrading the back end of the unit versus the front end, which is the wet compression proposal we are costing out now. The reason the waste heat recovery boiler was not considered was due to economics. The unit is so small, that the capital cost per megawatt would be very high. Our current permit would also limit our output on this unit and therefore we would not be able to take advantage of some of the additional output. It would most likely be more economic per megawatt to build new generation than to invest major capital in this unit.

Attached for your reference is a copy of past years projects as completed by NAES per the City of Dover capital investment plans. (This data is maintained in the forecast model) Please note, that during the contract period for Duke Energy we paid a monthly contract fee and did not have any details of what maintenance or replacement projects were conducted at the plant. (Upon the takeover of the plant I did request this information so I could record the assets. If I recall the major project was the replacement of the oil tank.) The NAES contract allows for more transparency and provides for operational and capital budgets that we review together and approve. The City pays the vendors directly. NAES started developing the CIP budget after the becoming familiar with the plant in 2007. Also keep in mind, while the projects may be budgeted in one particular year they don't always get completed in that year. We revise the following year budgets for carry forward balances. From FY07 through FY13 we have invested $8.0 million dollars in capital improvements. Projects directly related to Units 1 & 2 projects are shaded. Some of the plant projects are also related to Units 1 & 2 indirectly. There are also projects related to federal or state regulatory requirements such as the pollution remediation project that was completed using bond financing.

Two additional items attached are as follows:

The latest project report that Mr. Scire submits to City management during his planned outage period (PJM coordinated). These reports are sent to us every week and have been since NAES took over the plant.

The Net Electric Generation Benefit that was presented to City Council during the budget presentation last fiscal year along with an updated analysis that TEA completed for us with the assumptions for the retirement of Units 1 & 2 and the addition of 6 MW to the VanSant unit.

Hopefully, you will find this information helpful. Please feel free to contact myself or the City Manager if you have any questions.

Electric Forecast Model

CAPITAL PROJECTS	2008	2009	2010	2011	2012	2013	6 Year History FY08 - FY13	Budget 2014	Projected 2015	Projected 2016	Projected 2017	Projected 2018	5 Year Projection FY14 - FY18
Electric Generation Projects													
McKee Run Pollution Remediation - SNCR - Bonded	$199,445	$2,414,885	$ 209,735	$ -	$ -	$ -	$ 2,824,065	$ -	$ -	$ -	$ -	$ -	$ -
Plant Tank Inspection & Cleaning	291,910	-	-	-	-	-	291,910	-	-	-	-	-	-
Department of Energy Grant - Photovoltaic panels	-	-	-	65,065	-	-	65,065	-	-	-	-	-	-
McKee Run & Van Sant Arc Flash	-	-	15,000	3,522	-	-	18,522	-	-	-	-	-	-
McKee Warehouse/Admin Smoke & Heat Detection System	-	-	21,200	-	-	-	21,200	-	-	-	-	-	-
McKee Run Driveway Repaving (Bond Financing)	-	-	478	154,244	-	-	154,722	-	-	-	-	-	-
McKee Run Switchyard Blastwalls	-	-	-	-	43,196	-	43,196	-	-	-	-	-	-
Industrial Wastewater Discharge System	-	-	-	-	-	253,768	253,768	-	-	-	-	-	-
McKee Run Preservation of Structures	-	-	25,390	38,715	32,461	-	96,566	42,000	47,000	165,000	142,000	140,000	536,000
McKee Run Demineralizer Replacement	-	-	-	-	9,364	-	9,364	-	-	-	-	-	-
McKee Run Building Equipment Replacements	-	-	-	-	-	-	-	-	-	110,000	50,000	90,000	250,000
McKee Run Hot Water Boilers	-	-	-	-	-	-	-	-	-	-	-	80,000	80,000
McKee Run Turbine Level Window Modification	-	-	-	-	-	-	-	-	-	-	-	-	-
McKee Run High Energy Piping	-	-	-	-	-	-	-	80,000	-	-	-	-	80,000
McKee Run Natural Gas System Block/Bleed Valves	-	-	-	-	-	-	-	65,000	-	-	-	-	65,000
McKee Run Fuel Oil System Refurbishment	-	-	-	-	-	-	-	-	-	-	-	49,500	49,500
Industrial WW Discharge system	-	-	-	-	20,581	-	20,581	-	-	-	-	-	-
Unit 3 Fire Protection System	-	-	-	44,720	-	-	44,720	-	-	-	-	-	-
Unit 3 Software & Compupter Upgrades - CEMS	-	48,970	-	-	-	-	48,970	-	-	-	-	-	-
Unit 3 Software & Compupter Upgrades - COMS	-	28,236	-	-	-	-	28,236	-	-	-	-	-	-
Unit 3 - Stack Repairs	-	-	-	-	10,417	3,496	13,913	-	325,000	-	-	-	325,000
Unit 3 Boiler Air Heater	-	-	-	-	368,760	-	368,760	-	-	-	-	-	-
Unit 3 Boiler Systems	-	-	-	-	-	95,686	95,686	-	185,000	-	319,000	-	504,000
Unit 3 - Remove Cyclone Separators	-	-	51,265	-	-	-	51,265	-	-	-	-	-	-
Unit 3 - Gas Line Modification	-	-	-	23,794	15,723	-	39,517	-	-	-	-	-	-
Unit 3 FD & ID Fan Controller Upgrade	-	-	-	-	71,134	-	71,134	-	-	-	-	-	-
Unit 3 DCS Computers & Software Upgrades	-	-	-	-	58,156	3,075	61,231	-	-	-	-	-	-
Unit 3 Auxillary System Components	-	-	-	-	47,682	50,724	98,406	116,000	135,000	6,000	34,000	306,000	597,000
Unit 3 Turbine Outage - Inspections & Repairs	-	-	-	-	396,823	106,913	503,736	1,149,800	-	-	10,000	426,000	1,585,800
Unit 3 Cooling Water Line Replacement	-	-	-	-	-	-	-	-	-	250,000	-	-	250,000
Unit 3 Air Heater Expansion Joint	-	-	-	67,193	76,315	47,894	191,402	-	-	-	-	-	-
Unit 3 Cooling Tower Life Extension	-	-	-	371,513	-	-	371,513	42,000	571,000	52,000	138,000	-	803,000
Unit 3 Generator Repairs	-	-	-	-	-	250,822	250,822	-	-	-	-	-	-
Units 1 & 2 Life Extension	-	-	-	212,669	100,799	-	313,468	-	-	-	-	-	-
Units 1 & 2 Cooling Tower Life Extension	-	-	-	136,294	400	-	136,694	-	-	-	-	140,000	140,000
Units 1 & 2 Control Modifications	-	-	-	124,300	16,732	-	141,032	-	-	-	-	-	-
Units 1 & 2 Stack Repairs	-	-	-	-	-	14,000	14,000	-	-	285,000	-		285,000
Units 1 & 2 Boiler Repairs (see below for Unit 2 - FY11/12)	-	-	-	-	-	-	-	-	-	-	-	342,000	342,000
Units 1 & 2 Component Repairs	-	-	-	-	-	14,564	14,564	105,000	52,000	246,000	234,000	2,450,500	3,087,500
Unit 1 Gasket Leak Repair - Emergency Repair	-	-	-	-		88,086	88,086						-
Unit 1 Emergency Repair - Outage FY11	-	-	-	424,747	-	-	424,747	-	-	-	-	-	-
Unit 1 - Remove Cyclone Separators	-	-	9,534	-	-	-	9,534	-	-	-	-	-	-
Unit 2 - Remove Cyclone Separators	-	-	13,996	-	-	-	13,996	-	-	-	-	-	-
Unit 2 - Boiler Inspection & Repair	-	-	-	111,523	82,652	-	194,175	-	-	-	-	-	-
Units 1, 2 & 3 Hydrogen Purity Analyzers	-	-	-	-	-	-	-	-	-	180,000			180,000

Electric Forecast Model

CAPITAL PROJECTS	2008	2009	2010	2011	2012	2013	6 Year History FY08 - FY13	Budget 2014	Projected 2015	Projected 2016	Projected 2017	Projected 2018	5 Year Projection FY14 - FY18
VanSant Capacity Increase	-	-	-	-	-	-	-	250,000	750,000	500,000			1,500,000
VanSant Software & Compupter Upgrades - COMS	30,407	-	-	-	-	-	30,407	-	-	-	-	-	-
VanSant Software & Compupter Upgrades - CEMS	-	42,675	-	-	-	-	42,675	-	-	-	-	-	-
VanSant CT Mark IV Upgrades (Bond Financing)	-	-	286,637	152,050	-	-	438,687	-	-	-	-	-	-
VanSant Major Overhaul & Inspection	-	-	-	-	-	-	-	-	-	-	900,000	1,048,000	1,948,000
VanSant component replacements	-	-	-	-	51,418	-	51,418	32,000	75,000	178,000	58,000	150,000	493,000
Metering System Upgrades	-	-	-	-	-	-	-	25,000	125,000	-	-	-	150,000
Work Management Replacement System (Software)	-	-	16,718	9,859	-	-	26,577	-	-	-	-	-	-
Safety & Compliance Improvements	-	-	-	-	-	-	-	86,000	36,000	28,000	35,000	-	185,000
Vehicles, Trucks & Equipment	-	-	-	27,336	52,763	-	80,099	125,000	-	-	-	-	125,000
Total Electric Generation Division	$521,762	$2,534,766	$ 649,953	$1,967,544	$1,455,376	$ 929,028	$ 8,058,429	$2,117,800	$2,301,000	$2,000,000	$1,920,000	$5,222,000	$13,560,800
Original Budget	$377,000	$2,690,000	$1,254,000	$1,480,068	$1,810,410	$1,441,300							
Revised Budget	$777,000	$3,370,555	$1,401,645	$2,106,427	$1,897,455	$1,236,600							

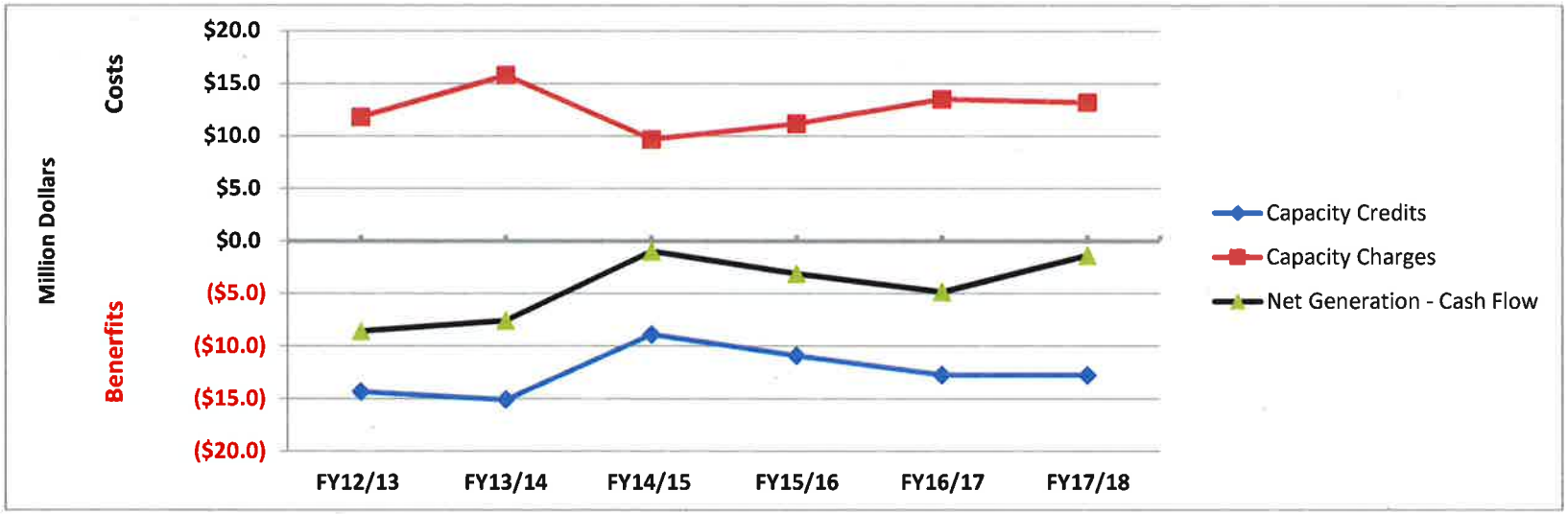
City of Dover

Net Electric Generation Benefit (as presented to City Council in the Electric Forecast 5/29/13)

	FY13 Budget	FY13 Revised	FY14 Proposed	FY15 Forecast	FY16 Forecast	FY17 Forecast	FY18 Forecast	FY14 thru FY18
Plant Operations	$ 5,914,900	$ 5,914,900	$ 6,015,800	$ 6,196,300	$ 6,382,200	$ 6,573,700	$ 6,770,900	$ 31,938,900
Capacity Credits	(14,318,600)	(14,318,600)	(15,079,800)	(8,881,500)	(10,889,000)	(12,718,600)	(12,746,000)	(60,314,900)
PJM Spot Market Energy (Net of Fuel)	(186,700)	(916,800)	(230,500)	(235,100)	(239,800)	(244,600)	(249,500)	(1,199,500)
PJM Credits	(427,000)	(488,400)	(397,000)	(367,000)	(367,000)	(367,000)	(367,000)	(1,865,000)
Net Generation - Operations	(9,017,400)	(9,808,900)	(9,691,500)	(3,287,300)	(5,113,600)	(6,756,500)	(6,591,600)	(31,440,500)
Capital Cost	1,441,300	1,236,600	2,117,800	2,301,000	2,000,000	1,920,000	5,222,000	13,560,800
Net Generation - Cash Flow	$ (7,576,100)	$ (8,572,300)	$ (7,573,700)	$ (986,300)	$ (3,113,600)	$ (4,836,500)	$ (1,369,600)	$ (17,879,700)

The City receives PJM capacity credits for our generating plant capacity. This revenue off-sets PJM's capacity charges which are required to serve approximately 180 MWH of our load plus reserves. If we did not have the ability to generate, we would loose the capacity credit but still have to pay the capacity charges PJM for our load requirements.

Capacity Charges	$ 12,564,800	$ 11,817,200	$ 15,787,200	$ 9,668,000	$ 11,163,200	$ 13,512,900	$ 13,187,400	$ 63,318,700



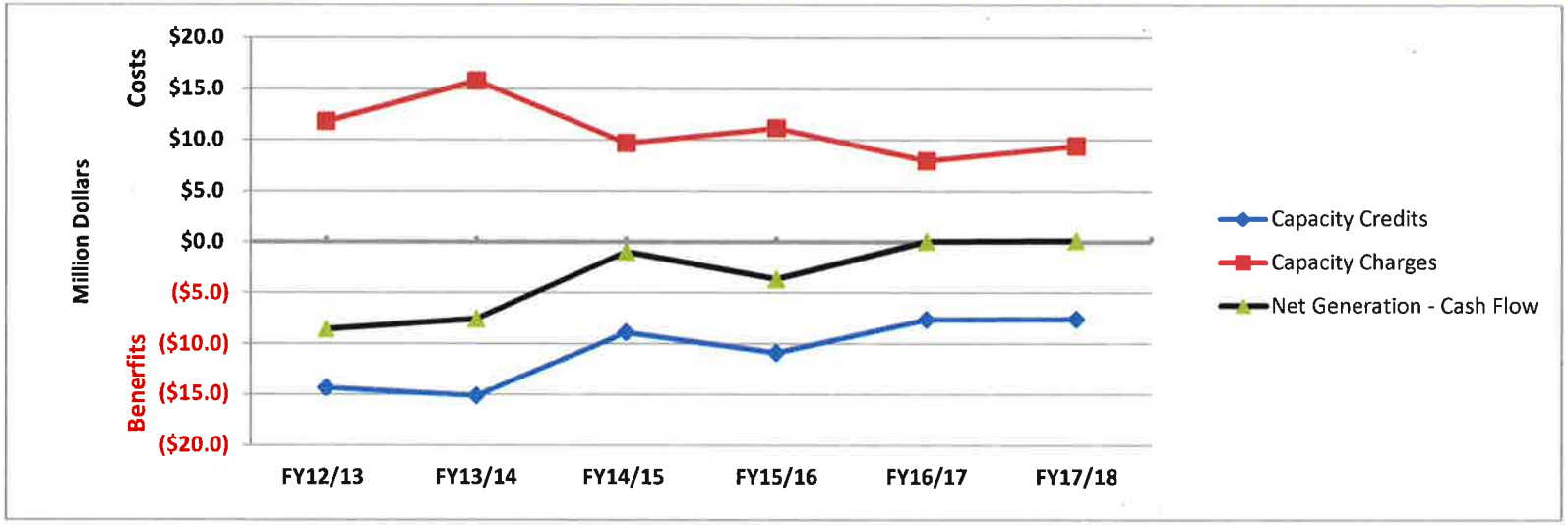
City of Dover

Net Electric Generation Benefit - Adjusted as of 12/4/2013 for Retirement of Units 1&2, Addition of VanSant by 6 MW

	FY12/13 Budget	FY12/13 Revised	FY13/14 Proposed	FY14/15 Forecast	FY15/16 Forecast	FY16/17 Forecast	FY17/18 Forecast	FY14 thru FY18
Plant Operations	$ 5,914,900	$ 5,914,900	$ 6,015,800	$ 6,196,300	$ 6,382,200	$ 6,573,700	$ 5,770,900	$ 30,938,900
Capacity Credits	(14,318,600)	(14,318,600)	(15,079,800)	(8,881,500)	(10,889,000)	(7,609,429)	(7,566,965)	(50,026,693)
PJM Spot Market Energy (Net of Fuel)	(186,700)	(916,800)	(230,500)	(235,100)	(239,800)	(244,600)	(249,500)	(1,199,500)
PJM Credits	(427,000)	(488,400)	(397,000)	(367,000)	(367,000)	(367,000)	(367,000)	(1,865,000)
Net Generation - Operations	(9,017,400)	(9,808,900)	(9,691,500)	(3,287,300)	(5,113,600)	(1,647,329)	(2,412,565)	(22,152,293)
Capital Cost	1,441,300	1,236,600	2,117,800	2,301,000	1,464,000	1,686,000	2,539,500	10,108,300
Net Generation - Cash Flow	$ (7,576,100)	$ (8,572,300)	$ (7,573,700)	$ (986,300)	$ (3,649,600)	$ 38,671	$ 126,935	$ (12,043,993)

The City receives PJM capacity credits for our generating plant capacity. This revenue off-sets PJM's capacity charges which are required to serve approximately 180 MWH of our load plus reserves. If we did not have the ability to generate, we would loose the capacity credit but still have to pay the capacity charges PJM for our load requirements.

Capacity Charges	$ 12,564,800	$ 11,817,200	$ 15,787,200	$ 9,668,000	$ 11,163,200	$ 7,957,288	$ 9,420,099	$ 53,995,787



Outage Status Report--Week 9

Project Title:	**Units 1, 2, 3 and 11 Fall 2013 Planned Outage**
Report Date:	**Wednesday, November 27, 2013**
Outage Objectives	**Perform outage related work that returns critical unit equipment to safe and reliable condition that supports maintaining unit availability in the most cost effective manner. All work will be performed in accordance with safe work practices and without impact to the environment.**
Major Work Activities Planned:	
Unit 1	**Boiler and drum insurance inspections. (Complete)** **Boiler duct work inspection. (Complete)** **Clean and inspect generator chokes and insulators. (Complete)** **Throttle valve mechanism replacement. (Complete)**
Unit 2	**Boiler and drum insurance inspections. (Complete)** **Boiler duct work inspection. (Complete)** **Clean and inspect generator chokes and insulators. (Complete)**
Unit 3	**Boiler duct work inspection. (Complete)** **Boiler and drum insurance inspections. (Complete)** **Boiler reheater support repair scope development (Deferred to Spring Outage)** **Drain, clean and inspect the Industrial Waste Water pit liner. (Complete)** **Cooling tower basin water level reduction and closure of discharge point to Outfall 005. (Complete)** **Cooling tower hot water basin decking replacement. (Complete)** **Boiler drains header piping and valve replacements. (Complete)** **Boiler main steam piping hanger adjustments. (Complete)**
Unit 11	**Inspect duct work and stack liner. (Complete)** **Remove/inspect/replace fuel nozzles and fuel oil check valves.(Complete)**
Planned Schedule:	**October 1, 2013 @ 0700 to November 27, 2013 @ 0700**
Week 9 -Schedule Update	**The planned outage for Units 1, 2, 3 and 11 was cleared with PJM on Wednesday, November 27, 2013 at 0640 hours. TEA was also notified of the clearing of outage. Units were made available for dispatch commencing HE 8 on 11/16/13 by TEA.**
Week 9 - Safety and Environ.	**There were no safety or environmental issues during the week.**

Accomplishments/ Problems for the Report Period:

Week 9
Units 1 and 2
The NAES Operations Team cleared the PJM outage tickets Wednesday November 27, 2013 at 0640 hours. Units have been walked down and are now ready for service, if requested.

Week 9
Unit 3
The NAES Mechanics and APEX Power and Heat (mechanical contractor) completed the installation of Unit 3 Boiler drain piping and isolation valves to the expansion tank. New heat tracing, insulation and lagging will need to be installed to complete this project.
The NAES Operations Team cleared the PJM outage ticket Wednesday November 27, 2013 at 0640 hours. Unit has been walked down and is now ready for service, if requested.

Week 9
Unit 11
The NAES Mechanics and ICE Technicians removed and replaced the AC lube oil pump. The Pump and motor were bump tested for proper rotation and then placed in service for further testing. With the pump and motor coupled together, both operated properly and the unit was placed on ratchet. Lockout/tagout was removed and unit was made ready for dispatch.
The NAES Operations Team cleared the PJM outage ticket Wednesday November 27, 2013 at 0640 hours. Unit has been walked down and is now ready for service, if requested.

Week 9
Other Plant Activities:
During the week, the Plant Maintenance staff continued addressing monthly preventive maintenance (PM) work orders, while completing outage activities. PM's for November are being addressed as planned and on schedule.

Items requiring Immediate Management Attention and / or Support:

Week 9
There were no immediate attention or support items addressed this week.

Actions to Problems/ Changes to Plan:

Week 9
There were no problems/changes to planned activities conducted during the week.

Major upcoming activities (two week look ahead):

Unit 1-

Resolution to the leakage problem on the expansion joint. Continuing to investigate and locate proper sealant. (No outage required)
NAES Mechanics to remove and install new continuous blowdown piping to the lab. (No outage required)

Unit 2- A1
Resolution to the leakage problem on the expansion joint. Continuing to investigate and locate proper sealant. (No outage required)

Unit 3-
NAES Mechanics to install framing for neutralization pit once parts are received. Cover material has yet to be ordered. as staff is waiting for material quotes.(No outage required)
County Scaffolding to remove scaffolding once plant repair projects (hanger adjustments and insulation repairs) have been completed. (No outage required)
NAES Mechanics to install "A" Industrial Waster Water pump once it is received. (No outage required)

Unit 11-
There are no upcoming activities.

Budget Update: As of 11-27-2013 Week 9

O&M Account Number	Description			Budgeted Amount	Committed to Date	Additional Expenses to Complete	Expected Total at Completion	Variance	Comments
480-8101-591-30-31	Contractual Services			$31,200	$18,565	$5,000	$23,565	$7,635	
480-8101-591-30-80	Auxiliary Systems Repairs - Maintenance			$15,700	$44,341	$2,500	$46,841	-$31,141	Note: Negative variance for the outage time frame due to ordering items and services that are budgeted for during the spring outage such as insulation repairs, chart recorder replacement, and air compressor maintenance kits.
480-8101-591-30-81	Boiler Repairs			$10,000	$13,346	$0	$13,346	-$3,346	
480-8101-591-30-82	Continuous Emission Monitors			$9,000	$5,209	$1,800	$7,009	$1,991	
480-8101-591-30-85	Cooling Tower Systems Maintenance			$3,000	$872	$2,128	$3,000	$0	
480-8101-591-30-87	Combustion Turbine Maintenance			$5,000	$6,158	$1,500	$7,658	-$2,658	Note: Negative variance for the outage time frame due to performing an unscheduled borescope inspection prior to replacing Van Sant fuel nozzles.
480-8101-591-30-88	Power Distribution Repairs			$3,000	$1,383	$900	$2,283	$717	
480-8101-591-30-89	Turbine Generator Repairs-Maintenance			$4,000	$3,291	$709	$4,000	$0	
Total O&M				$80,900	$93,165	$14,537	$107,702	-$26,802	

Capital Projects

Capital Project Number	Description			Budgeted Amount	Committed to Date	Additional Expenses to Complete	Expected Total at Completion	Variance	Comments
EG1212	Unit #3 Turbine Inspection			$1,149,800	$764,138	$385,662	$1,149,800	$0	Bid awarded for Inspection - Repair Services, Consumables have been purchased with some parts being received. Work to be done in the spring outage
EG1402	Unit #3 Cooling Tower Repairs			$42,000	$31,575	$10,425	$42,000	$0	Major Work completed 10-24-2013
EG1404	Unit #3 Auxiliary Component Replacement - Repairs			$116,000	$75,559	$40,441	$116,000	$0	Waste Water Pump Repairs to Date, Unit #3 Boiler Header Drain Repairs
EG1405	Van Sant Component Replacement - Repairs			$32,000	$30,245	$1,755	$32,000	$0	Fuel Nozzle Parts from Inventory - Nozzles, Check Valves, Gaskets, Flex Lines. Lube oil pump replacement costs to be determined next week. Expect this job to be overspent.
EG1406	McKee Run High Energy Piping Repairs			$80,000	$0	$80,000	$80,000	$0	Planning ongoing, No expenditures to date this FY. Work to be performed in the spring overhaul
EG1407	Metering System Upgrades			$25,000	$0	$25,000	$25,000	$0	Project meeting held, planning ongoing, no expenditures to date, work not scheduled this outage. Have received quote form COD vendor. Getting clarification from vendor on several items.
EG1408	McKee Run and Van Sant Safety and Compliance			$86,000	$0	$86,000	$86,000	$0	Work not scheduled this outage.
EG1409	McKee Run Natural Gas Block and Bleed Valve Replacement			$65,000	$0	$65,000	$65,000	$0	Planning ongoing, No expenditures to date this FY.
EG1413	McKee Run - Van Sant Structural Preservation			$42,000	$0	$42,000	$42,000	$0	Bids received. Project on hold due to budget restraints.
EG1415	McKee Run Units #1-#2 Component Repair - Replacement			$105,000	$31,173	$73,827	$105,000	$0	Unit #1 Boiler Tube Leak and Turbine Throttle Valve Repairs. Balance of work to be performed in the spring outage
EG1416	Van Sant Capacity Increase			$250,000	$51,350	$198,650	$250,000	$0	Permitting and Engineering Support activities only to date.
Total Capital				**$1,992,800**	**$984,040**	**$1,008,760**	**$1,992,800**	**$0**	

Contractors on Site During Course of Outage	Scope	On Site Week 9
EVAPTECH (Cooling Tower Contractor)	Remove and install hot water basin cover.	No - Work is completed.
General Electric (Measurement and Control Solutions)	Borescope inspection of fuel system combustion internal parts.	No - Work is Complete
Hallaton Inc. (Industrial Waste Pit Liner Repair Company)	IWW pit liner inspection and repairs to liner.	No - Work is Complete
XL Insurance Company (Boiler/Drum Inspector)	Inspection of internal steam drums for Units 1, 2, 3 and mud drums for Units 1 & 2.	No - Work is Complete
County Scaffolding Company	Install scaffolding for various projects on Units 1,2,3	No - will need to return at a later time to take down scaffold once insulation and hangar adjustments are complete.
County Insulation Company	Install insulation and lagging for various projects on Units 1,2,3	Yes
APEX Heat and Power LLC.	Install root isolation valves for two projects on Unit 3.	Yes