Progress Energy

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COMMISSION CLERK

September 9, 2010

VIA HAND DELIVERY

Ms. Ann Cole, Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: *Petition for approval of a third negotiated purchase power contract with Hathaway Renewable Energy, Inc. by Progress Energy Florida, Inc.*; Docket No. 100347-EQ

Dear Ms. Cole:

Please find enclosed for filing on behalf of Progress Energy Florida, Inc. ("PEF") the original and five (5) copies of PEF's responses to Staff's Data Request No. 2 in the above referenced docket.

Thank you for your assistance in this matter. Please call me at (727) 820-5184 should you have any questions.

Sincerely,

John T. Burnett LMS

John T. Burnett

JTB/lms

cc: Hathaway Renewable Energy

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FPSC-COMMISSION CLERK

PROGRESS ENERGY FLORIDA, INC.'S RESPONSES TO STAFF DATA REQUEST NO. 2
DOCKET NO. 100347-EQ

Q1. Please provide a detailed timeline or schedule of events beginning with initial negotiation talks leading up to an agreed and signed contract proposal between Hathaway and PEF and ending with the submittal of the proposed contracts to the FPSC.

Response: Hathaway first contacted PEF regarding a renewable capacity and energy proposal on January 5, 2010. An initial meeting to discuss a possible contract occurred at 8:30 a.m. on January 18, 2010. After this first meeting, negotiations progressed with Hathaway on January 22, 2010 and continued until the contracts were signed on June 22, 2010. During the negotiations, PEF obtained internal approvals including a presentation to our Transaction Review Committee on March 24, 2010 and subsequent acknowledgement from the members of the Transaction Review Committee from March 29, 2010 through April 26, 2010, a presentation to our Risk Management Committee on March 26, 2010 and subsequent approval from the Risk Management Committee and a consent resolution from the PEF Board of Directors on May 5, 2010. Final negotiations and final PEF Legal review occurred from May 10, 2010 through June 18, 2010. All three contracts were executed June 22, 2010. PEF's petition for approval and the executed contracts were filed at the FPSC on July 6, 2010.

Q2. Please describe in detail the schedule of application requirements to be met in order for each facility to qualify for grants from the 2009 American Reinvestment and Renewal Act, as mentioned in Hathaway's response to Q9 of Staff's First Data Request.

Hathaway Response: The application requirements for the Section 1603 Grant in Lieu of Tax Credits can be found at the US Treasury's website: http://www.ustreas.gov/recovery/1603.shtml

There will be two applications for each 16-20 MW plant, for a total of six applications. One application for each plant will cover the "fuel cell" portion of the plant described by IRC section 48, the second application will cover the "combined cycle" or "hybrid" portion of the plant as described by IRC section 45k for Open Loop Woody Biomass. All six applications are due to the US Treasury by 1 OCT 2011.

Prior to submission of the applications, Hathaway must meet the provisions of Section IV. Property and Payment Elibility (A.) Placed in Service:

> **IV(A.) Placed in Service** Qualified property must be originally placed in service between January 1, 2009, and December 31, 2010, (regardless of when construction begins) or **placed in service after 2010 and before the credit termination date (see below) if construction of the property begins between January 1, 2009, and December 31, 2010.** Qualified property includes

> expansions of an existing property that is qualified property under section 45 or 48 of the IRC. Placed in service means that the property is ready and available for its specific use.

There are three ways to meet the requirement for "Beginning of Construction." Those provisions are 1) Self Construction, 2) Construction by Contract, 3) Safe Harbor. Hathaway intends to meet the requirement for Beginning of Construction through the Safe Harbor provision.

> **Safe Harbor.** An applicant may treat physical work of a significant nature as beginning when the applicant incurs (in the case of an accrual basis applicant) or pays (in the case of a cash basis applicant) more than 5 percent of the total cost of the property (excluding the cost of any land and preliminary activities such as planning or designing, securing financing, exploring, or researching). When property is manufactured, constructed, or produced for the applicant by another person, this test must be met by the applicant, not the other person. For the purpose of determining whether an applicant has incurred more than 5 percent of the total cost of the property, the economic performance standards of IRC section 461(h) apply.

Safe Harbor will be attained by the end of calendar year 2010, satisfying the requirement for Beginning of Construction between January 1, 2009 and December 31, 2010.

Lastly, once the application is accepted by US Treasury and within 60 days of October 1, 2011, **Hathaway will have until the Credit Determination Date to bring the plants on line.** The Credit Determination Date for Open Loop Woody Biomass is January 1, 2014, while the Credit Determination Date for Fuel Cell Property is January 2, 2017. Grant proceeds are payable within 60 days of bringing a plant online.

B. Credit Termination Date and Applicable Payment Percentage

The following chart lists the Credit Termination Date and the applicable percentage of eligible cost basis used in computing the payment for each specified energy property.

Specified Energy Property	Credit Termination Date	Applicable Percentage of Eligible Cost Basis
Large Wind	Jan 1, 2013	30%
Closed-Loop Biomass Facility	Jan 1, 2014	30%
Open-loop Biomass Facility	Jan 1, 2014	30%
Geothermal under IRC sec. 45	Jan 1, 2014	30%
Landfill Gas Facility	Jan 1, 2014	30%
Trash Facility	Jan 1, 2014	30%
Qualified Hydropower Facility	Jan 1, 2014	30%
Marine & Hydrokinetic	Jan 1, 2014	30%
Solar	Jan 1, 2017	30%
Geothermal under IRC sec. 48	Jan 1, 2017	10%*
Fuel Cells	Jan 1, 2017	30%**
Microturbines	Jan 1, 2017	10%***
Combined Heat & Power	Jan 1, 2017	10%
Small Wind	Jan 1, 2017	30%
Geothermal Heat Pumps	Jan 1, 2017	10%

Q3. **In Staff's First Data Request, PEF's response to Q14 was a percent based from the 2009 Standard Offer Contract. Was there any consideration given to the performance abilities of the type of technology being used to verify the reliability of a capacity factor of 94%?**

PEF Response: No, Hathaway has represented to PEF that it can meet a capacity factor of 94% with the proposed technology thereby matching the capacity factor of the avoided unit. In the event that Hathaway cannot obtain a capacity factor of at least 94%, the capacity payment will be reduced. Such a reduction protects PEF's ratepayers from paying for capacity that they did not receive, if Hathaway cannot fulfill its obligations; and, monetarily addresses the verification of reliability.

Q4. **Are the security provisions and performance measures of the contracts consistent with PEF's past contracts negotiated with third-party vendors? If not, please explain the reason for any changes.**

PEF Response: Yes, the security provisions and performance measures of the Hathaway contracts are consistent with PEF's past QF contracts. As in the past, the security provisions are based on guidelines developed from the cost of replacement capacity and the performance measures are based on the characteristics of the avoided unit.

Q5. **PEF's response to Q16 of Staff's First Data Request states that PEF used the 2009 Ten Year Site Plan (TYSP) fuel price forecast instead of the 2010 fuel price forecast as stated on Page 2 of the petition. Why was the 2009 TYSP forecast used instead of the 2010 TYSP forecast?**

PEF Response: As stated in PEF's Question #1 response, negotiations began before PEF's 2010 Standard Offer Contract had been fully developed; therefore, the Hathaway contracts were negotiated against the then open, 2009 Standard Offer Contract and the corresponding 2009 fuel forecast which was used to determine PEF's 2009 avoided unit.

Q6. **What fuel forecast was used to determine the Total Project Net Benefit/ (Cost) NPV for the contract? Please include in your response the date of the forecast and the entity that developed the forecast.**

PEF Response: The contract's Total Project Net Benefit/ (Cost) NPV was calculated using PEF's 2009 TYSP natural gas fuel price forecast. The 2009 TYSP fuel forecast was based on the NYMEX prices as of August 18, 2008 out through 2011; and, the summer 2008 forecasts from third party consultants such as, PIRA and Global Insight, for the year 2012 and beyond.

Q7. **PEF's response to Q16 of Staff's First Data Request states that PEF used the 2009 TYSP fuel price forecast to calculate the forecasted fuel prices for natural gas. How did PEF estimate the forecasted fuel prices for the years 2019 through 2038 (the years beyond the 2009 TYSP forecast through the life of the project) and from whom was this forecast obtained?**

PEF Response: The estimated fuel prices for 2019 through 2028 were provided by third party consultants such as PIRA and Global Insight. PEF estimated the forecasted fuel prices for the years 2029 through 2038 by assuming an annual increase of 2.25%. This value is based on the annual escalation seen in the final five years of the 2009 TYSP forecast.

Q8. **In PEF's responses to Staff's Second Data Request in Docket No. 090537-EQ, PEF provided Staff an Attachment A in response to Q3. Attachment A is also provided in this Data Request. Following the model set forth in Attachment A, please provide staff the appropriate calculations using both the 2009 TYSP fuel price forecast and the 2010 TYSP fuel price forecast. Please use a variance of 15% above and below the forecasted fuel prices instead of the 20% used in Attachment A.**

PEF Response: Please see the table below. Six cases are including in the table. There are:

- A – 2009 Standard Offer Contract with the 2009 TYSP fuel forecast
- B – 2009 Standard Offer Contract with a 15% increase to the 2009 TYSP fuel forecast
- C – 2009 Standard Offer Contract with a 15% decrease to the 2009 TYSP fuel forecast
- D – 2010 Standard Offer Contract with the 2010 TYSP fuel forecast

- E – 2010 Standard Offer Contract with a 15% increase to the 2010 TYSP fuel forecast
- F – 2010 Standard Offer Contract with a 15% decrease to the 2010 TYSP fuel forecast

Note that the NPV totals in this spreadsheet differ slightly from previously submitted values because in the previous submission the annual values were rounded to the nearest thousand dollars.

Hathaway Contract 3
Attachments A-F
Dollars in $000

	Total NPV	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
A. 2009 Standard Offer:																											
NPV of Payments To Hathaway	$ 113,777	$ 809	$ 9,756	$ 9,268	$ 8,076	$ 6,879	$ 6,357	$ 5,929	$ 5,571	$ 5,349	$ 5,067	$ 4,848	$ 4,392	$ 4,233	$ 4,019	$ 3,897	$ 3,599	$ 3,374	$ 3,169	$ 2,977	$ 2,802	$ 2,627	$ 2,468	$ 2,319	$ 2,183	$ 2,048	$ 1,762
NPV of Avoided Capacity Costs	$ 19,967	$ -	$ 772	$ 1,266	$ 1,212	$ 1,160	$ 1,110	$ 1,063	$ 1,017	$ 973	$ 932	$ 892	$ 854	$ 817	$ 783	$ 749	$ 717	$ 687	$ 657	$ 629	$ 603	$ 577	$ 552	$ 529	$ 506	$ 485	$ 426
NPV of Avoided Energy Costs	$ 93,840	$ 648	$ 7,975	$ 7,626	$ 6,563	$ 5,484	$ 5,071	$ 4,744	$ 4,479	$ 4,342	$ 4,138	$ 3,992	$ 3,603	$ 3,506	$ 3,348	$ 3,279	$ 3,030	$ 2,849	$ 2,685	$ 2,531	$ 2,391	$ 2,248	$ 2,119	$ 1,997	$ 1,887	$ 1,774	$ 1,531
NPV of Net Benefit (Cost)	$ 29	$ (161)	$ (1,010)	$ (376)	$ (302)	$ (235)	$ (176)	$ (123)	$ (76)	$ (34)	$ 4	$ 36	$ 65	$ 90	$ 112	$ 131	$ 148	$ 162	$ 174	$ 183	$ 191	$ 198	$ 203	$ 207	$ 210	$ 211	$ 194
B. 2009 Standard Offer with 15% Increase in Energy Costs:																											
NPV of Payments To Hathaway	$ 127,853	$ 906	$ 10,953	$ 10,412	$ 9,061	$ 7,702	$ 7,118	$ 6,641	$ 6,243	$ 6,000	$ 5,687	$ 5,446	$ 4,932	$ 4,759	$ 4,521	$ 4,389	$ 4,053	$ 3,801	$ 3,572	$ 3,357	$ 3,160	$ 2,964	$ 2,786	$ 2,619	$ 2,466	$ 2,314	$ 1,992
NPV of Avoided Capacity Costs	$ 19,967	$ -	$ 772	$ 1,266	$ 1,212	$ 1,160	$ 1,110	$ 1,063	$ 1,017	$ 973	$ 932	$ 892	$ 854	$ 817	$ 783	$ 749	$ 717	$ 687	$ 657	$ 629	$ 603	$ 577	$ 552	$ 529	$ 506	$ 485	$ 426
NPV of Avoided Energy Costs	$ 107,916	$ 745	$ 9,172	$ 8,770	$ 7,548	$ 6,307	$ 5,832	$ 5,456	$ 5,151	$ 4,993	$ 4,759	$ 4,591	$ 4,144	$ 4,032	$ 3,851	$ 3,771	$ 3,484	$ 3,276	$ 3,088	$ 2,910	$ 2,749	$ 2,585	$ 2,437	$ 2,297	$ 2,170	$ 2,040	$ 1,760
NPV of Net Benefit (Cost)	$ 29	$ (161)	$ (1,010)	$ (376)	$ (302)	$ (235)	$ (176)	$ (123)	$ (76)	$ (34)	$ 4	$ 36	$ 65	$ 90	$ 112	$ 131	$ 148	$ 162	$ 174	$ 183	$ 191	$ 198	$ 203	$ 207	$ 210	$ 211	$ 194
C. 2009 Standard Offer with 15% Decrease in Energy Costs:																											
NPV of Payments To Hathaway	$ 99,701	$ 711	$ 8,560	$ 8,124	$ 7,092	$ 6,056	$ 5,596	$ 5,218	$ 4,899	$ 4,698	$ 4,446	$ 4,249	$ 3,851	$ 3,707	$ 3,516	$ 3,405	$ 3,144	$ 2,946	$ 2,766	$ 2,597	$ 2,443	$ 2,290	$ 2,150	$ 2,020	$ 1,900	$ 1,781	$ 1,532
NPV of Avoided Capacity Costs	$ 19,967	$ -	$ 772	$ 1,266	$ 1,212	$ 1,160	$ 1,110	$ 1,063	$ 1,017	$ 973	$ 932	$ 892	$ 854	$ 817	$ 783	$ 749	$ 717	$ 687	$ 657	$ 629	$ 603	$ 577	$ 552	$ 529	$ 506	$ 485	$ 426
NPV of Avoided Energy Costs	$ 79,764	$ 550	$ 6,779	$ 6,482	$ 5,579	$ 4,661	$ 4,310	$ 4,032	$ 3,807	$ 3,691	$ 3,518	$ 3,393	$ 3,063	$ 2,980	$ 2,846	$ 2,788	$ 2,575	$ 2,421	$ 2,282	$ 2,151	$ 2,032	$ 1,911	$ 1,801	$ 1,698	$ 1,604	$ 1,508	$ 1,301
NPV of Net Benefit (Cost)	$ 29	$ (161)	$ (1,010)	$ (376)	$ (302)	$ (235)	$ (176)	$ (123)	$ (76)	$ (34)	$ 4	$ 36	$ 65	$ 90	$ 112	$ 131	$ 148	$ 162	$ 174	$ 183	$ 191	$ 198	$ 203	$ 207	$ 210	$ 211	$ 194
D. 2010 Standard Offer:																											
NPV of Payments To Hathaway	$ 135,701	$ 686	$ 8,849	$ 9,228	$ 8,867	$ 8,683	$ 8,429	$ 7,514	$ 6,713	$ 6,016	$ 5,746	$ 5,506	$ 5,556	$ 5,311	$ 5,029	$ 4,921	$ 4,531	$ 4,286	$ 4,069	$ 3,862	$ 3,673	$ 3,481	$ 3,305	$ 3,139	$ 2,987	$ 2,831	$ 2,481
NPV of Avoided Capacity Costs	$ 8,106	$ -	$ -	$ -	$ -	$ -	$ 364	$ 595	$ 567	$ 540	$ 514	$ 488	$ 464	$ 444	$ 421	$ 402	$ 381	$ 363	$ 346	$ 330	$ 313	$ 300	$ 285	$ 270	$ 258	$ 246	$ 215
NPV of Avoided Energy Costs	$ 114,895	$ 523	$ 7,042	$ 7,557	$ 7,321	$ 7,253	$ 7,106	$ 6,290	$ 5,581	$ 4,969	$ 4,777	$ 4,610	$ 4,727	$ 4,545	$ 4,320	$ 4,265	$ 3,924	$ 3,725	$ 3,549	$ 3,382	$ 3,229	$ 3,070	$ 2,925	$ 2,787	$ 2,661	$ 2,530	$ 2,226
NPV of Net Benefit (Cost)	$ (12,700)	$ (163)	$ (1,807)	$ (1,671)	$ (1,546)	$ (1,430)	$ (959)	$ (629)	$ (565)	$ (507)	$ (455)	$ (408)	$ (365)	$ (323)	$ (288)	$ (254)	$ (226)	$ (198)	$ (173)	$ (151)	$ (131)	$ (111)	$ (95)	$ (81)	$ (67)	$ (55)	$ (41)
E. 2010 Standard Offer with 15% Increase in Energy Costs:																											
NPV of Payments To Hathaway	$ 152,936	$ 765	$ 9,905	$ 10,361	$ 9,965	$ 9,771	$ 9,495	$ 8,458	$ 7,550	$ 6,761	$ 6,463	$ 6,198	$ 6,265	$ 5,993	$ 5,677	$ 5,561	$ 5,120	$ 4,845	$ 4,601	$ 4,369	$ 4,158	$ 3,941	$ 3,744	$ 3,557	$ 3,386	$ 3,211	$ 2,815
NPV of Avoided Capacity Costs	$ 8,106	$ -	$ -	$ -	$ -	$ -	$ 364	$ 595	$ 567	$ 540	$ 514	$ 488	$ 464	$ 444	$ 421	$ 402	$ 381	$ 363	$ 346	$ 330	$ 313	$ 300	$ 285	$ 270	$ 258	$ 246	$ 215
NPV of Avoided Energy Costs	$ 132,130	$ 602	$ 8,099	$ 8,690	$ 8,419	$ 8,341	$ 8,172	$ 7,234	$ 6,419	$ 5,714	$ 5,494	$ 5,302	$ 5,436	$ 5,226	$ 4,967	$ 4,905	$ 4,513	$ 4,283	$ 4,082	$ 3,889	$ 3,713	$ 3,530	$ 3,364	$ 3,205	$ 3,060	$ 2,910	$ 2,560
NPV of Net Benefit (Cost)	$ (12,700)	$ (163)	$ (1,807)	$ (1,671)	$ (1,546)	$ (1,430)	$ (959)	$ (629)	$ (565)	$ (507)	$ (455)	$ (408)	$ (365)	$ (323)	$ (288)	$ (254)	$ (226)	$ (198)	$ (173)	$ (151)	$ (131)	$ (111)	$ (95)	$ (81)	$ (67)	$ (55)	$ (41)
F. 2010 Standard Offer with 15% Decrease in Energy Costs:																											
NPV of Payments To Hathaway	$ 118,467	$ 608	$ 7,792	$ 8,094	$ 7,769	$ 7,595	$ 7,363	$ 6,571	$ 5,876	$ 5,271	$ 5,029	$ 4,815	$ 4,847	$ 4,630	$ 4,381	$ 4,282	$ 3,942	$ 3,727	$ 3,536	$ 3,355	$ 3,189	$ 3,020	$ 2,867	$ 2,721	$ 2,587	$ 2,452	$ 2,147
NPV of Avoided Capacity Costs	$ 8,106	$ -	$ -	$ -	$ -	$ -	$ 364	$ 595	$ 567	$ 540	$ 514	$ 488	$ 464	$ 444	$ 421	$ 402	$ 381	$ 363	$ 346	$ 330	$ 313	$ 300	$ 285	$ 270	$ 258	$ 246	$ 215
NPV of Avoided Energy Costs	$ 97,661	$ 445	$ 5,986	$ 6,423	$ 6,223	$ 6,165	$ 6,040	$ 5,347	$ 4,744	$ 4,224	$ 4,061	$ 3,919	$ 4,018	$ 3,863	$ 3,672	$ 3,625	$ 3,335	$ 3,166	$ 3,017	$ 2,874	$ 2,745	$ 2,609	$ 2,486	$ 2,369	$ 2,262	$ 2,151	$ 1,892
NPV of Net Benefit (Cost)	$ (12,700)	$ (163)	$ (1,807)	$ (1,671)	$ (1,546)	$ (1,430)	$ (959)	$ (629)	$ (565)	$ (507)	$ (455)	$ (408)	$ (365)	$ (323)	$ (288)	$ (254)	$ (226)	$ (198)	$ (173)	$ (151)	$ (131)	$ (111)	$ (95)	$ (81)	$ (67)	$ (55)	$ (41)

Q9. The avoided unit capacity payments in the 2009 standard offer contract appear to be significantly less than the avoided unit capacity payments in the 2010 standard offer contract. Please explain why there appears to be such a significant decrease in payments (i.e. reduction of the costs of the technology).

PEF Response: The 2010 avoided unit capacity payments are less than the 2009 avoided unit capacity payments due to timing and current economic conditions. The 2009 avoided unit is a combustion turbine and has an in-service date of June, 2014. The 2010 avoided unit is a combustion turbine and has an in-service date of June, 2018. The four year difference between the in-service dates reduces the Net Present Value of the payments. In addition, as a result of the current economic conditions, the cost of major materials and labor has decreased.

Q10. In Docket No. 100009-EI, PEF Witness Lyash supported Exhibit JL-3 which included three generation expansion plans that did not include the 2018, 178 MW combustion turbine found in PEF's 2010 standard offer contract. Based on the information provided by PEF witness Lyash, should PEF close its 2010 standard offer contract?

PEF Response: No, PEF should not close its 2010 Standard Offer Contract.

In Docket No. 100009-EI, PEF witness Lyash supported Exhibit JL-3 which included three Levy Nuclear Project, (LNP) ownership scenarios where a cumulative present value of revenue requirements, (CPVRR) was updated in conjunction with a an updated quantitative LNP feasibility analysis as originally filed in Docket No. 090009-EI to determine the feasibility of the LNP in Docket No. 100009-EI. This analysis is consistent with the Company's decision to continue the project on a slower pace with in-service dates for the Levy nuclear units in 2021 and 2022. The reasonableness of the Company decision is at issue in Docket No. 100009-EI and subject to the Commission's determination. The Company will consider that Commission determination in the normal course of its integrated resource planning process leading up to the Company's next Ten Year Site Plan to be filed April 1, 2011.

As such, the 178 MW natural gas combustion turbine as identified in PEF's 2010 TYSP is still valid as the next and only PEF unit available to be avoided under Commission Rule 25-17.250(1) , where the in service date remains June 1, 2018.

Q11. Between the 2009 Standard Offer Contract, the 2010 Standard Offer Contract, and the newly reported avoided Combined Cycle facility, please explain what PEF would consider a reasonable baseline for the contract's avoided unit cost payments.

PEF Response: The 2009 Standard Offer Contract is the appropriate and reasonable baseline for Hathaway's avoided cost payments. As stated in PEF's Question #1 response, negotiations with Hathaway began before the 2010 Standard Offer Contract was fully developed, completed or submitted to the FPSC for approval on April 1, 2010.

Q12. Please complete the table assuming the 2019 Generic 2x1 G CC listed in Exhibit JL-3 of PEF witness Lyash's testimony in Docket No. 100009. Please assume the fuel forecast used in PEF's 2010 TYSP.

PEF Response: The 2019 Generic CC is not valid for a standard offer contract at this time.

Q13. Please complete the table assuming the 2019 Generic 2x1 G CC listed in Exhibit JL-3 of PEF witness Lyash's testimony in Docket No. 100009. Please assume a fuel forecast that is 15 percent above PEF's 2010 TYSP.

PEF Response: The 2019 Generic CC is not valid for a standard offer contract at this time.

Q14. Please complete the table assuming the 2019 Generic 2x1 G CC listed in Exhibit JL-3 of PEF witness Lyash's testimony in Docket No. 100009. Please assume a fuel forecast that is 15 percent below PEF's 2010 TYSP.

PEF Response: The 2019 Generic CC is not valid for a standard offer contract at this time.

Q15. Please complete the table assuming PEF's 2010 standard offer contract. Please assume the fuel forecast used in PEF's 2010 TYSP.

<u>PEF Response</u>:

Hathaway Contract 3
PEF's 2010 Standard Offer

$000	(7)	(8)	(9)	(10)
	Avoided Capacity Payments	Avoided Energy Payments	(7) + (8) Avoided Energy & Capacity Payments	Avoided Cumulative Payments
Units	$	$	$	$
Year				
2010	$ -	$ -	$ -	$ -
2011	$ -	$ -	$ -	$ -
2012	$ -	$ -	$ -	$ -
2013	$ -	$ 661	$ 661	$ 661
2014	$ -	$ 9,617	$ 9,617	$ 10,278
2015	$ -	$ 11,155	$ 11,155	$ 21,433
2016	$ -	$ 11,685	$ 11,685	$ 33,118
2017	$ -	$ 12,514	$ 12,514	$ 45,632
2018	$ 679	$ 13,253	$ 13,932	$ 59,564
2019	$ 1,200	$ 12,681	$ 13,881	$ 73,445
2020	$ 1,236	$ 12,165	$ 13,401	$ 86,846
2021	$ 1,272	$ 11,707	$ 12,979	$ 99,825
2022	$ 1,308	$ 12,167	$ 13,475	$ 113,300
2023	$ 1,344	$ 12,692	$ 14,036	$ 127,336
2024	$ 1,380	$ 14,070	$ 15,450	$ 142,786
2025	$ 1,428	$ 14,622	$ 16,050	$ 158,836
2026	$ 1,464	$ 15,023	$ 16,487	$ 175,323
2027	$ 1,512	$ 16,035	$ 17,547	$ 192,870
2028	$ 1,548	$ 15,950	$ 17,498	$ 210,368
2029	$ 1,596	$ 16,365	$ 17,961	$ 228,329
2030	$ 1,644	$ 16,857	$ 18,501	$ 246,830
2031	$ 1,692	$ 17,362	$ 19,054	$ 265,884
2032	$ 1,740	$ 17,923	$ 19,663	$ 285,547
2033	$ 1,800	$ 18,419	$ 20,219	$ 305,766
2034	$ 1,848	$ 18,972	$ 20,820	$ 326,586
2035	$ 1,896	$ 19,542	$ 21,438	$ 348,024
2036	$ 1,956	$ 20,173	$ 22,129	$ 370,153
2037	$ 2,016	$ 20,732	$ 22,748	$ 392,901
2038	$ 1,903	$ 19,714	$ 21,617	$ 414,518
Total	$ 32,462	$382,056	$414,518	
NPV 2010$	$ 8,106	$114,895	$123,002	

Q16. Please complete the table assuming PEF's 2010 standard offer contract. Please assume a fuel forecast that is 15 percent above PEF's 2010 TYSP.

PEF Response:

Hathaway Contract 3
PEF's 2010 Standard Offer with 15% Increase in Energy Costs

$000	(7)	(8)	(9)	(10)
	Avoided Capacity Payments	Avoided Energy Payments	(7) + (8) Avoided Energy & Capacity Payments	Avoided Cumulative Payments
Units	$	$	$	$
Year				
2010	$ -	$ -	$ -	$ -
2011	$ -	$ -	$ -	$ -
2012	$ -	$ -	$ -	$ -
2013	$ -	$ 760	$ 760	$ 760
2014	$ -	$ 11,060	$ 11,060	$ 11,820
2015	$ -	$ 12,828	$ 12,828	$ 24,648
2016	$ -	$ 13,438	$ 13,438	$ 38,086
2017	$ -	$ 14,391	$ 14,391	$ 52,477
2018	$ 679	$ 15,241	$ 15,920	$ 68,397
2019	$ 1,200	$ 14,583	$ 15,783	$ 84,180
2020	$ 1,236	$ 13,990	$ 15,226	$ 99,406
2021	$ 1,272	$ 13,463	$ 14,735	$ 114,141
2022	$ 1,308	$ 13,992	$ 15,300	$ 129,441
2023	$ 1,344	$ 14,596	$ 15,940	$ 145,381
2024	$ 1,380	$ 16,181	$ 17,561	$ 162,941
2025	$ 1,428	$ 16,815	$ 18,243	$ 181,184
2026	$ 1,464	$ 17,276	$ 18,740	$ 199,925
2027	$ 1,512	$ 18,440	$ 19,952	$ 219,877
2028	$ 1,548	$ 18,343	$ 19,891	$ 239,768
2029	$ 1,596	$ 18,820	$ 20,416	$ 260,183
2030	$ 1,644	$ 19,386	$ 21,030	$ 281,213
2031	$ 1,692	$ 19,966	$ 21,658	$ 302,871
2032	$ 1,740	$ 20,611	$ 22,351	$ 325,223
2033	$ 1,800	$ 21,182	$ 22,982	$ 348,204
2034	$ 1,848	$ 21,818	$ 23,666	$ 371,870
2035	$ 1,896	$ 22,473	$ 24,369	$ 396,240
2036	$ 1,956	$ 23,199	$ 25,155	$ 421,395
2037	$ 2,016	$ 23,842	$ 25,858	$ 447,252
2038	$ 1,903	$ 22,671	$ 24,574	$ 471,826
Total	$ 32,462	$439,364	$471,826	
NPV 2010$	$ 8,106	$132,130	$140,236	

Q17. Please complete the table assuming PEF's 2010 standard offer contract. Please assume a fuel forecast that is <u>15 percent below</u> PEF's 2010 TYSP.

<u>PEF Response</u>:

Hathaway Contract 3
PEF's 2010 Standard Offer with 15% Decrease in Energy Costs

$000	(7)	(8)	(9)	(10)
	Avoided Capacity Payments	Avoided Energy Payments	(7) + (8) Avoided Energy & Capacity Payments	Avoided Cumulative Payments
Units	$	$	$	$
Year				
2010	$ -	$ -	$ -	$ -
2011	$ -	$ -	$ -	$ -
2012	$ -	$ -	$ -	$ -
2013	$ -	$ 562	$ 562	$ 562
2014	$ -	$ 8,174	$ 8,174	$ 8,736
2015	$ -	$ 9,482	$ 9,482	$ 18,218
2016	$ -	$ 9,932	$ 9,932	$ 28,150
2017	$ -	$ 10,637	$ 10,637	$ 38,787
2018	$ 679	$ 11,265	$ 11,944	$ 50,731
2019	$ 1,200	$ 10,779	$ 11,979	$ 62,710
2020	$ 1,236	$ 10,340	$ 11,576	$ 74,286
2021	$ 1,272	$ 9,951	$ 11,223	$ 85,509
2022	$ 1,308	$ 10,342	$ 11,650	$ 97,159
2023	$ 1,344	$ 10,788	$ 12,132	$ 109,291
2024	$ 1,380	$ 11,960	$ 13,340	$ 122,631
2025	$ 1,428	$ 12,429	$ 13,857	$ 136,488
2026	$ 1,464	$ 12,770	$ 14,234	$ 150,721
2027	$ 1,512	$ 13,630	$ 15,142	$ 165,863
2028	$ 1,548	$ 13,558	$ 15,106	$ 180,968
2029	$ 1,596	$ 13,910	$ 15,506	$ 196,475
2030	$ 1,644	$ 14,328	$ 15,972	$ 212,447
2031	$ 1,692	$ 14,758	$ 16,450	$ 228,897
2032	$ 1,740	$ 15,235	$ 16,975	$ 245,871
2033	$ 1,800	$ 15,656	$ 17,456	$ 263,328
2034	$ 1,848	$ 16,126	$ 17,974	$ 281,302
2035	$ 1,896	$ 16,611	$ 18,507	$ 299,808
2036	$ 1,956	$ 17,147	$ 19,103	$ 318,912
2037	$ 2,016	$ 17,622	$ 19,638	$ 338,550
2038	$ 1,903	$ 16,757	$ 18,660	$ 357,210
Total	$ 32,462	$ 324,748	$ 357,210	
NPV 2010$	$ 8,106	$ 97,661	$ 105,767	

Q18. Please complete the table for the Contract between PEF and Hathaway. Please assume the fuel forecast used in PEF's 2010 TYSP. Also, please ensure that the energy payments are consistent with the parameters described in section 12.1 of the contract.

PEF Response:

Hathaway Contract 3
PEF's 2010 Standard Offer

$000	(7)	(8)	(9)	(10)
	Contract Energy Payments	Contract Capacity Payments	(7) + (8) Contract Energy & Capacity Payments	Cumulative Contract Payments
Units	$	$	$	$
Year				
2010	$ -	$ -	$ -	$ -
2011	$ -	$ -	$ -	$ -
2012	$ -	$ -	$ -	$ -
2013	$ 661	$ 206	$ 867	$ 867
2014	$ 9,617	$ 2,467	$ 12,084	$ 12,951
2015	$ 11,155	$ 2,467	$ 13,622	$ 26,573
2016	$ 11,685	$ 2,467	$ 14,152	$ 40,725
2017	$ 12,514	$ 2,467	$ 14,981	$ 55,706
2018	$ 13,253	$ 2,467	$ 15,720	$ 71,426
2019	$ 12,681	$ 2,467	$ 15,148	$ 86,574
2020	$ 12,165	$ 2,467	$ 14,632	$ 101,206
2021	$ 11,707	$ 2,467	$ 14,174	$ 115,380
2022	$ 12,167	$ 2,467	$ 14,634	$ 130,014
2023	$ 12,692	$ 2,467	$ 15,159	$ 145,173
2024	$ 14,070	$ 2,467	$ 16,537	$ 161,710
2025	$ 14,622	$ 2,467	$ 17,089	$ 178,799
2026	$ 15,023	$ 2,467	$ 17,490	$ 196,289
2027	$ 16,035	$ 2,467	$ 18,502	$ 214,791
2028	$ 15,950	$ 2,467	$ 18,417	$ 233,208
2029	$ 16,365	$ 2,467	$ 18,832	$ 252,040
2030	$ 16,857	$ 2,467	$ 19,324	$ 271,364
2031	$ 17,362	$ 2,467	$ 19,829	$ 291,193
2032	$ 17,923	$ 2,467	$ 20,390	$ 311,583
2033	$ 18,419	$ 2,467	$ 20,886	$ 332,469
2034	$ 18,972	$ 2,467	$ 21,439	$ 353,908
2035	$ 19,542	$ 2,467	$ 22,009	$ 375,917
2036	$ 20,173	$ 2,467	$ 22,640	$ 398,557
2037	$ 20,732	$ 2,467	$ 23,199	$ 421,756
2038	$ 19,714	$ 2,262	$ 21,976	$ 443,732
Total	$ 382,056	$ 61,676	$ 443,732	
NPV 2010$	$ 114,895	$ 20,806	$ 135,701	

Q19. Please complete the table for the Contract between PEF and Hathaway. Please assume a fuel forecast that is <u>15 percent above</u> PEF's 2010 TYSP. Also, please ensure that the energy payments are consistent with the parameters described in section 12.1 of the contract.

<u>PEF Response</u>:

Hathaway Contract 3
PEF's 2010 Standard Offer with 15% Increase in Energy Costs

$000	(7)	(8)	(9)	(10)
	Contract Energy Payments	Contract Capacity Payments	(7) + (8) Contract Energy & Capacity Payments	Cumulative Contract Payments
Units	$	$	$	$
Year				
2010	$ -	$ -	$ -	$ -
2011	$ -	$ -	$ -	$ -
2012	$ -	$ -	$ -	$ -
2013	$ 760	$ 206	$ 966	$ 966
2014	$ 11,060	$ 2,467	$ 13,527	$ 14,493
2015	$ 12,828	$ 2,467	$ 15,295	$ 29,788
2016	$ 13,438	$ 2,467	$ 15,905	$ 45,693
2017	$ 14,391	$ 2,467	$ 16,858	$ 62,551
2018	$ 15,241	$ 2,467	$ 17,708	$ 80,259
2019	$ 14,583	$ 2,467	$ 17,050	$ 97,309
2020	$ 13,990	$ 2,467	$ 16,457	$ 113,766
2021	$ 13,463	$ 2,467	$ 15,930	$ 129,696
2022	$ 13,992	$ 2,467	$ 16,459	$ 146,155
2023	$ 14,596	$ 2,467	$ 17,063	$ 163,218
2024	$ 16,181	$ 2,467	$ 18,648	$ 181,865
2025	$ 16,815	$ 2,467	$ 19,282	$ 201,147
2026	$ 17,276	$ 2,467	$ 19,743	$ 220,891
2027	$ 18,440	$ 2,467	$ 20,907	$ 241,798
2028	$ 18,343	$ 2,467	$ 20,810	$ 262,608
2029	$ 18,820	$ 2,467	$ 21,287	$ 283,894
2030	$ 19,386	$ 2,467	$ 21,853	$ 305,747
2031	$ 19,966	$ 2,467	$ 22,433	$ 328,180
2032	$ 20,611	$ 2,467	$ 23,078	$ 351,259
2033	$ 21,182	$ 2,467	$ 23,649	$ 374,907
2034	$ 21,818	$ 2,467	$ 24,285	$ 399,192
2035	$ 22,473	$ 2,467	$ 24,940	$ 424,133
2036	$ 23,199	$ 2,467	$ 25,666	$ 449,799
2037	$ 23,842	$ 2,467	$ 26,309	$ 476,107
2038	$ 22,671	$ 2,262	$ 24,933	$ 501,040
Total	$ 439,364	$ 61,676	$ 501,040	
NPV 2010$	$ 132,130	$ 20,806	$ 152,936	

Q20. Please complete the table for the Contract between PEF and Hathaway. Please assume a fuel forecast that is 15 percent below PEF's 2010 TYSP. Also, please ensure that the energy payments are consistent with the parameters described in section 12.1 of the contract.

PEF Response:

Hathaway Contract 3
PEF's 2010 Standard Offer with 15% Decrease in Energy Costs

$000	(7)	(8)	(9)	(10)
	Contract Energy Payments	Contract Capacity Payments	(7) + (8) Contract Energy & Capacity Payments	Cumulative Contract Payments
Units	$	$	$	$
Year				
2010	$ -	$ -	$ -	$ -
2011	$ -	$ -	$ -	$ -
2012	$ -	$ -	$ -	$ -
2013	$ 562	$ 206	$ 768	$ 768
2014	$ 8,174	$ 2,467	$ 10,641	$ 11,409
2015	$ 9,482	$ 2,467	$ 11,949	$ 23,358
2016	$ 9,932	$ 2,467	$ 12,399	$ 35,757
2017	$ 10,637	$ 2,467	$ 13,104	$ 48,861
2018	$ 11,265	$ 2,467	$ 13,732	$ 62,593
2019	$ 10,779	$ 2,467	$ 13,246	$ 75,839
2020	$ 10,340	$ 2,467	$ 12,807	$ 88,646
2021	$ 9,951	$ 2,467	$ 12,418	$ 101,064
2022	$ 10,342	$ 2,467	$ 12,809	$ 113,873
2023	$ 10,788	$ 2,467	$ 13,255	$ 127,128
2024	$ 11,960	$ 2,467	$ 14,427	$ 141,555
2025	$ 12,429	$ 2,467	$ 14,896	$ 156,451
2026	$ 12,770	$ 2,467	$ 15,237	$ 171,687
2027	$ 13,630	$ 2,467	$ 16,097	$ 187,784
2028	$ 13,558	$ 2,467	$ 16,025	$ 203,808
2029	$ 13,910	$ 2,467	$ 16,377	$ 220,186
2030	$ 14,328	$ 2,467	$ 16,795	$ 236,981
2031	$ 14,758	$ 2,467	$ 17,225	$ 254,206
2032	$ 15,235	$ 2,467	$ 17,702	$ 271,907
2033	$ 15,656	$ 2,467	$ 18,123	$ 290,031
2034	$ 16,126	$ 2,467	$ 18,593	$ 308,624
2035	$ 16,611	$ 2,467	$ 19,078	$ 327,701
2036	$ 17,147	$ 2,467	$ 19,614	$ 347,316
2037	$ 17,622	$ 2,467	$ 20,089	$ 367,405
2038	$ 16,757	$ 2,262	$ 19,019	$ 386,424
Total	$ 324,748	$ 61,676	$386,424	
NPV 2010$	$ 97,661	$ 20,806	$118,467	