Progress Energy

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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 negotiated purchase power contract with Hathaway Renewable Energy, Inc. by Progress Energy Florida, Inc.*; Docket No. 100345-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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Progress Energy Florida, Inc.'s Responses to Staff Data Request No. 2
Docket No. 100345-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.

<u>Response</u>: 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.

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

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:

> **<u>IV(A.) Placed in Service</u>** 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 1
Attachments A-F
Dollars in $000

	Total NPV	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
A. 2009 Standard Offer:													
NPV of Payments To Hathaway	$ 119,945	$ 10,563	$ 9,590	$ 9,114	$ 7,935	$ 6,749	$ 6,237	$ 5,819	$ 5,469	$ 5,255	$ 4,980	$ 4,768	$ 4,318
NPV of Avoided Capacity Costs	$ 19,541	$ -	$ 772	$ 1,266	$ 1,212	$ 1,160	$ 1,110	$ 1,063	$ 1,017	$ 973	$ 932	$ 892	$ 854
NPV of Avoided Energy Costs	$ 100,473	$ 8,812	$ 7,975	$ 7,626	$ 6,563	$ 5,484	$ 5,071	$ 4,744	$ 4,479	$ 4,342	$ 4,138	$ 3,992	$ 3,603
NPV of Net Benefit (Cost)	$ 69	$ (1,752)	$ (843)	$ (222)	$ (160)	$ (105)	$ (56)	$ (12)	$ 26	$ 60	$ 90	$ 116	$ 139
B. 2009 Standard Offer with 15% Increase in Energy Costs:													
NPV of Payments To Hathaway	$ 135,016	$ 11,885	$ 10,786	$ 10,258	$ 8,920	$ 7,571	$ 6,998	$ 6,530	$ 6,141	$ 5,906	$ 5,601	$ 5,366	$ 4,859
NPV of Avoided Capacity Costs	$ 19,541	$ -	$ 772	$ 1,266	$ 1,212	$ 1,160	$ 1,110	$ 1,063	$ 1,017	$ 973	$ 932	$ 892	$ 854
NPV of Avoided Energy Costs	$ 115,544	$ 10,133	$ 9,172	$ 8,770	$ 7,548	$ 6,307	$ 5,832	$ 5,456	$ 5,151	$ 4,993	$ 4,759	$ 4,591	$ 4,144
NPV of Net Benefit (Cost)	$ 69	$ (1,752)	$ (843)	$ (222)	$ (160)	$ (105)	$ (56)	$ (12)	$ 26	$ 60	$ 90	$ 116	$ 139
C. 2009 Standard Offer with 15% Decrease in Energy Costs:													
NPV of Payments To Hathaway	$ 104,874	$ 9,242	$ 8,394	$ 7,971	$ 6,951	$ 5,926	$ 5,476	$ 5,107	$ 4,797	$ 4,604	$ 4,359	$ 4,169	$ 3,778
NPV of Avoided Capacity Costs	$ 19,541	$ -	$ 772	$ 1,266	$ 1,212	$ 1,160	$ 1,110	$ 1,063	$ 1,017	$ 973	$ 932	$ 892	$ 854
NPV of Avoided Energy Costs	$ 85,402	$ 7,490	$ 6,779	$ 6,482	$ 5,579	$ 4,661	$ 4,310	$ 4,032	$ 3,807	$ 3,691	$ 3,518	$ 3,393	$ 3,063
NPV of Net Benefit (Cost)	$ 69	$ (1,752)	$ (843)	$ (222)	$ (160)	$ (105)	$ (56)	$ (12)	$ 26	$ 60	$ 90	$ 116	$ 139
D. 2010 Standard Offer:													
NPV of Payments To Hathaway	$ 139,698	$ 9,065	$ 8,680	$ 9,072	$ 8,723	$ 8,550	$ 8,306	$ 7,400	$ 6,608	$ 5,918	$ 5,656	$ 5,423	$ 5,479
NPV of Avoided Capacity Costs	$ 7,891	$ -	$ -	$ -	$ -	$ -	$ 364	$ 595	$ 567	$ 540	$ 514	$ 488	$ 464
NPV of Avoided Energy Costs	$ 119,441	$ 7,294	$ 7,042	$ 7,557	$ 7,321	$ 7,253	$ 7,106	$ 6,290	$ 5,581	$ 4,969	$ 4,777	$ 4,610	$ 4,727
NPV of Net Benefit (Cost)	$ (12,366)	$ (1,771)	$ (1,638)	$ (1,515)	$ (1,402)	$ (1,297)	$ (835)	$ (514)	$ (459)	$ (410)	$ (365)	$ (324)	$ (288)
E. 2010 Standard Offer with 15% Increase in Energy Costs:													
NPV of Payments To Hathaway	$ 157,614	$ 10,159	$ 9,737	$ 10,206	$ 9,821	$ 9,638	$ 9,372	$ 8,344	$ 7,445	$ 6,664	$ 6,372	$ 6,114	$ 6,188
NPV of Avoided Capacity Costs	$ 7,891	$ -	$ -	$ -	$ -	$ -	$ 364	$ 595	$ 567	$ 540	$ 514	$ 488	$ 464
NPV of Avoided Energy Costs	$ 137,357	$ 8,388	$ 8,099	$ 8,690	$ 8,419	$ 8,341	$ 8,172	$ 7,234	$ 6,419	$ 5,714	$ 5,494	$ 5,302	$ 5,436
NPV of Net Benefit (Cost)	$ (12,366)	$ (1,771)	$ (1,638)	$ (1,515)	$ (1,402)	$ (1,297)	$ (835)	$ (514)	$ (459)	$ (410)	$ (365)	$ (324)	$ (288)
F. 2010 Standard Offer with 15% Decrease in Energy Costs:													
NPV of Payments To Hathaway	$ 121,782	$ 7,971	$ 7,624	$ 7,939	$ 7,625	$ 7,462	$ 7,240	$ 6,457	$ 5,770	$ 5,173	$ 4,939	$ 4,731	$ 4,770
NPV of Avoided Capacity Costs	$ 7,891	$ -	$ -	$ -	$ -	$ -	$ 364	$ 595	$ 567	$ 540	$ 514	$ 488	$ 464
NPV of Avoided Energy Costs	$ 101,524	$ 6,200	$ 5,986	$ 6,423	$ 6,223	$ 6,165	$ 6,040	$ 5,347	$ 4,744	$ 4,224	$ 4,061	$ 3,919	$ 4,018
NPV of Net Benefit (Cost)	$ (12,366)	$ (1,771)	$ (1,638)	$ (1,515)	$ (1,402)	$ (1,297)	$ (835)	$ (514)	$ (459)	$ (410)	$ (365)	$ (324)	$ (288)

	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
A. 2009 Standard Offer:													
NPV of Payments To Hathaway	$ 4,165	$ 3,956	$ 3,840	$ 3,546	$ 3,325	$ 3,124	$ 2,935	$ 2,763	$ 2,592	$ 2,436	$ 2,289	$ 2,156	$ 2,022
NPV of Avoided Capacity Costs	$ 817	$ 783	$ 749	$ 717	$ 687	$ 657	$ 629	$ 603	$ 577	$ 552	$ 529	$ 506	$ 485
NPV of Avoided Energy Costs	$ 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
NPV of Net Benefit (Cost)	$ 158	$ 175	$ 189	$ 201	$ 211	$ 219	$ 225	$ 230	$ 233	$ 236	$ 237	$ 237	$ 237
B. 2009 Standard Offer with 15% Increase in Energy Costs:													
NPV of Payments To Hathaway	$ 4,691	$ 4,458	$ 4,331	$ 4,000	$ 3,752	$ 3,526	$ 3,315	$ 3,122	$ 2,929	$ 2,753	$ 2,589	$ 2,439	$ 2,288
NPV of Avoided Capacity Costs	$ 817	$ 783	$ 749	$ 717	$ 687	$ 657	$ 629	$ 603	$ 577	$ 552	$ 529	$ 506	$ 485
NPV of Avoided Energy Costs	$ 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
NPV of Net Benefit (Cost)	$ 158	$ 175	$ 189	$ 201	$ 211	$ 219	$ 225	$ 230	$ 233	$ 236	$ 237	$ 237	$ 237
C. 2009 Standard Offer with 15% Decrease in Energy Costs:													
NPV of Payments To Hathaway	$ 3,640	$ 3,454	$ 3,348	$ 3,091	$ 2,897	$ 2,721	$ 2,556	$ 2,405	$ 2,254	$ 2,118	$ 1,990	$ 1,873	$ 1,756
NPV of Avoided Capacity Costs	$ 817	$ 783	$ 749	$ 717	$ 687	$ 657	$ 629	$ 603	$ 577	$ 552	$ 529	$ 506	$ 485
NPV of Avoided Energy Costs	$ 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
NPV of Net Benefit (Cost)	$ 158	$ 175	$ 189	$ 201	$ 211	$ 219	$ 225	$ 230	$ 233	$ 236	$ 237	$ 237	$ 237
D. 2010 Standard Offer:													
NPV of Payments To Hathaway	$ 5,240	$ 4,963	$ 4,860	$ 4,474	$ 4,234	$ 4,020	$ 3,817	$ 3,632	$ 3,442	$ 3,270	$ 3,106	$ 2,956	$ 2,803
NPV of Avoided Capacity Costs	$ 444	$ 421	$ 402	$ 381	$ 363	$ 346	$ 330	$ 313	$ 300	$ 285	$ 270	$ 258	$ 246
NPV of Avoided Energy Costs	$ 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
NPV of Net Benefit (Cost)	$ (251)	$ (222)	$ (193)	$ (170)	$ (146)	$ (125)	$ (106)	$ (90)	$ (73)	$ (60)	$ (49)	$ (37)	$ (27)
E. 2010 Standard Offer with 15% Increase in Energy Costs:													
NPV of Payments To Hathaway	$ 5,922	$ 5,611	$ 5,500	$ 5,063	$ 4,792	$ 4,553	$ 4,325	$ 4,116	$ 3,903	$ 3,709	$ 3,524	$ 3,355	$ 3,183
NPV of Avoided Capacity Costs	$ 444	$ 421	$ 402	$ 381	$ 363	$ 346	$ 330	$ 313	$ 300	$ 285	$ 270	$ 258	$ 246
NPV of Avoided Energy Costs	$ 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
NPV of Net Benefit (Cost)	$ (251)	$ (222)	$ (193)	$ (170)	$ (146)	$ (125)	$ (106)	$ (90)	$ (73)	$ (60)	$ (49)	$ (37)	$ (27)
F. 2010 Standard Offer with 15% Decrease in Energy Costs:													
NPV of Payments To Hathaway	$ 4,558	$ 4,315	$ 4,220	$ 3,886	$ 3,675	$ 3,488	$ 3,310	$ 3,148	$ 2,982	$ 2,831	$ 2,688	$ 2,557	$ 2,424
NPV of Avoided Capacity Costs	$ 444	$ 421	$ 402	$ 381	$ 363	$ 346	$ 330	$ 313	$ 300	$ 285	$ 270	$ 258	$ 246
NPV of Avoided Energy Costs	$ 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
NPV of Net Benefit (Cost)	$ (251)	$ (222)	$ (193)	$ (170)	$ (146)	$ (125)	$ (106)	$ (90)	$ (73)	$ (60)	$ (49)	$ (37)	$ (27)

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.

PEF Response:

Hathaway Contract 1
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	$ -	$ 9,215	$ 9,215	$ 9,215
2014	$ -	$ 9,617	$ 9,617	$ 18,832
2015	$ -	$ 11,155	$ 11,155	$ 29,987
2016	$ -	$ 11,685	$ 11,685	$ 41,672
2017	$ -	$ 12,514	$ 12,514	$ 54,186
2018	$ 679	$ 13,253	$ 13,932	$ 68,118
2019	$ 1,200	$ 12,681	$ 13,881	$ 81,999
2020	$ 1,236	$ 12,165	$ 13,401	$ 95,400
2021	$ 1,272	$ 11,707	$ 12,979	$ 108,379
2022	$ 1,308	$ 12,167	$ 13,475	$ 121,854
2023	$ 1,344	$ 12,692	$ 14,036	$ 135,890
2024	$ 1,380	$ 14,070	$ 15,450	$ 151,340
2025	$ 1,428	$ 14,622	$ 16,050	$ 167,390
2026	$ 1,464	$ 15,023	$ 16,487	$ 183,877
2027	$ 1,512	$ 16,035	$ 17,547	$ 201,424
2028	$ 1,548	$ 15,950	$ 17,498	$ 218,922
2029	$ 1,596	$ 16,365	$ 17,961	$ 236,883
2030	$ 1,644	$ 16,857	$ 18,501	$ 255,384
2031	$ 1,692	$ 17,362	$ 19,054	$ 274,438
2032	$ 1,740	$ 17,923	$ 19,663	$ 294,101
2033	$ 1,800	$ 18,419	$ 20,219	$ 314,320
2034	$ 1,848	$ 18,972	$ 20,820	$ 335,140
2035	$ 1,896	$ 19,542	$ 21,438	$ 356,578
2036	$ 1,956	$ 20,173	$ 22,129	$ 378,707
2037	$ 2,016	$ 20,732	$ 22,748	$ 401,455
2038	$ -	$ -	$ -	$ 401,455
Total	$ 30,559	$370,896	$401,455	
NPV 2010$	$ 7,891	$119,441	$127,332	

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

<u>PEF Response</u>:

Hathaway Contract 1
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	$ -	$ 10,597	$ 10,597	$ 10,597
2014	$ -	$ 11,060	$ 11,060	$ 21,657
2015	$ -	$ 12,828	$ 12,828	$ 34,485
2016	$ -	$ 13,438	$ 13,438	$ 47,923
2017	$ -	$ 14,391	$ 14,391	$ 62,314
2018	$ 679	$ 15,241	$ 15,920	$ 78,234
2019	$ 1,200	$ 14,583	$ 15,783	$ 94,017
2020	$ 1,236	$ 13,990	$ 15,226	$ 109,243
2021	$ 1,272	$ 13,463	$ 14,735	$ 123,978
2022	$ 1,308	$ 13,992	$ 15,300	$ 139,278
2023	$ 1,344	$ 14,596	$ 15,940	$ 155,218
2024	$ 1,380	$ 16,181	$ 17,561	$ 172,778
2025	$ 1,428	$ 16,815	$ 18,243	$ 191,021
2026	$ 1,464	$ 17,276	$ 18,740	$ 209,762
2027	$ 1,512	$ 18,440	$ 19,952	$ 229,714
2028	$ 1,548	$ 18,343	$ 19,891	$ 249,605
2029	$ 1,596	$ 18,820	$ 20,416	$ 270,020
2030	$ 1,644	$ 19,386	$ 21,030	$ 291,050
2031	$ 1,692	$ 19,966	$ 21,658	$ 312,708
2032	$ 1,740	$ 20,611	$ 22,351	$ 335,060
2033	$ 1,800	$ 21,182	$ 22,982	$ 358,042
2034	$ 1,848	$ 21,818	$ 23,666	$ 381,707
2035	$ 1,896	$ 22,473	$ 24,369	$ 406,077
2036	$ 1,956	$ 23,199	$ 25,155	$ 431,232
2037	$ 2,016	$ 23,842	$ 25,858	$ 457,089
2038	$ -	$ -	$ -	$ 457,089
Total	$ 30,559	$426,530	$457,089	
NPV 2010$	$ 7,891	$137,357	$145,248	

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

PEF Response:

Hathaway Contract 1
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	$ -	$ 7,833	$ 7,833	$ 7,833
2014	$ -	$ 8,174	$ 8,174	$ 16,007
2015	$ -	$ 9,482	$ 9,482	$ 25,489
2016	$ -	$ 9,932	$ 9,932	$ 35,421
2017	$ -	$ 10,637	$ 10,637	$ 46,058
2018	$ 679	$ 11,265	$ 11,944	$ 58,002
2019	$ 1,200	$ 10,779	$ 11,979	$ 69,981
2020	$ 1,236	$ 10,340	$ 11,576	$ 81,557
2021	$ 1,272	$ 9,951	$ 11,223	$ 92,780
2022	$ 1,308	$ 10,342	$ 11,650	$ 104,430
2023	$ 1,344	$ 10,788	$ 12,132	$ 116,562
2024	$ 1,380	$ 11,960	$ 13,340	$ 129,902
2025	$ 1,428	$ 12,429	$ 13,857	$ 143,759
2026	$ 1,464	$ 12,770	$ 14,234	$ 157,992
2027	$ 1,512	$ 13,630	$ 15,142	$ 173,134
2028	$ 1,548	$ 13,558	$ 15,106	$ 188,239
2029	$ 1,596	$ 13,910	$ 15,506	$ 203,746
2030	$ 1,644	$ 14,328	$ 15,972	$ 219,718
2031	$ 1,692	$ 14,758	$ 16,450	$ 236,168
2032	$ 1,740	$ 15,235	$ 16,975	$ 253,142
2033	$ 1,800	$ 15,656	$ 17,456	$ 270,598
2034	$ 1,848	$ 16,126	$ 17,974	$ 288,573
2035	$ 1,896	$ 16,611	$ 18,507	$ 307,079
2036	$ 1,956	$ 17,147	$ 19,103	$ 326,182
2037	$ 2,016	$ 17,622	$ 19,638	$ 345,821
2038	$ -	$ -	$ -	$ 345,821
Total	$ 30,559	$315,262	$345,821	
NPV 2010$	$ 7,891	$101,524	$109,416	

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 1
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	$ 9,215	$ 2,237	$ 11,452	$ 11,452
2014	$ 9,617	$ 2,237	$ 11,854	$ 23,306
2015	$ 11,155	$ 2,237	$ 13,392	$ 36,698
2016	$ 11,685	$ 2,237	$ 13,922	$ 50,620
2017	$ 12,514	$ 2,237	$ 14,751	$ 65,371
2018	$ 13,253	$ 2,237	$ 15,490	$ 80,861
2019	$ 12,681	$ 2,237	$ 14,918	$ 95,779
2020	$ 12,165	$ 2,237	$ 14,402	$ 110,181
2021	$ 11,707	$ 2,237	$ 13,944	$ 124,125
2022	$ 12,167	$ 2,237	$ 14,404	$ 138,529
2023	$ 12,692	$ 2,237	$ 14,929	$ 153,458
2024	$ 14,070	$ 2,237	$ 16,307	$ 169,765
2025	$ 14,622	$ 2,237	$ 16,859	$ 186,624
2026	$ 15,023	$ 2,237	$ 17,260	$ 203,884
2027	$ 16,035	$ 2,237	$ 18,272	$ 222,156
2028	$ 15,950	$ 2,237	$ 18,187	$ 240,343
2029	$ 16,365	$ 2,237	$ 18,602	$ 258,945
2030	$ 16,857	$ 2,237	$ 19,094	$ 278,039
2031	$ 17,362	$ 2,237	$ 19,599	$ 297,638
2032	$ 17,923	$ 2,237	$ 20,160	$ 317,798
2033	$ 18,419	$ 2,237	$ 20,656	$ 338,454
2034	$ 18,972	$ 2,237	$ 21,209	$ 359,663
2035	$ 19,542	$ 2,237	$ 21,779	$ 381,442
2036	$ 20,173	$ 2,237	$ 22,410	$ 403,852
2037	$ 20,732	$ 2,237	$ 22,969	$ 426,821
2038	$ -	$ -	$ -	$ 426,821
Total	$ 370,896	$ 55,925	$426,821	
NPV 2010$	$ 119,441	$ 20,257	$139,698	

Q19. Please complete the table for the Contract between PEF and Hathaway. Please assume a fuel forecast that is 15 percent above 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 1
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	$ 10,597	$ 2,237	$ 12,834	$ 12,834
2014	$ 11,060	$ 2,237	$ 13,297	$ 26,131
2015	$ 12,828	$ 2,237	$ 15,065	$ 41,196
2016	$ 13,438	$ 2,237	$ 15,675	$ 56,871
2017	$ 14,391	$ 2,237	$ 16,628	$ 73,499
2018	$ 15,241	$ 2,237	$ 17,478	$ 90,977
2019	$ 14,583	$ 2,237	$ 16,820	$ 107,797
2020	$ 13,990	$ 2,237	$ 16,227	$ 124,024
2021	$ 13,463	$ 2,237	$ 15,700	$ 139,724
2022	$ 13,992	$ 2,237	$ 16,229	$ 155,953
2023	$ 14,596	$ 2,237	$ 16,833	$ 172,786
2024	$ 16,181	$ 2,237	$ 18,418	$ 191,203
2025	$ 16,815	$ 2,237	$ 19,052	$ 210,255
2026	$ 17,276	$ 2,237	$ 19,513	$ 229,769
2027	$ 18,440	$ 2,237	$ 20,677	$ 250,446
2028	$ 18,343	$ 2,237	$ 20,580	$ 271,026
2029	$ 18,820	$ 2,237	$ 21,057	$ 292,082
2030	$ 19,386	$ 2,237	$ 21,623	$ 313,705
2031	$ 19,966	$ 2,237	$ 22,203	$ 335,908
2032	$ 20,611	$ 2,237	$ 22,848	$ 358,757
2033	$ 21,182	$ 2,237	$ 23,419	$ 382,176
2034	$ 21,818	$ 2,237	$ 24,055	$ 406,230
2035	$ 22,473	$ 2,237	$ 24,710	$ 430,941
2036	$ 23,199	$ 2,237	$ 25,436	$ 456,377
2037	$ 23,842	$ 2,237	$ 26,079	$ 482,455
2038	$ -	$ -	$ -	$ 482,455
Total	$ 426,530	$ 55,925	$ 482,455	
NPV 2010$	$ 137,357	$ 20,257	$ 157,614	

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 1
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	$ 7,833	$ 2,237	$ 10,070	$ 10,070
2014	$ 8,174	$ 2,237	$ 10,411	$ 20,481
2015	$ 9,482	$ 2,237	$ 11,719	$ 32,200
2016	$ 9,932	$ 2,237	$ 12,169	$ 44,369
2017	$ 10,637	$ 2,237	$ 12,874	$ 57,243
2018	$ 11,265	$ 2,237	$ 13,502	$ 70,745
2019	$ 10,779	$ 2,237	$ 13,016	$ 83,761
2020	$ 10,340	$ 2,237	$ 12,577	$ 96,338
2021	$ 9,951	$ 2,237	$ 12,188	$ 108,526
2022	$ 10,342	$ 2,237	$ 12,579	$ 121,105
2023	$ 10,788	$ 2,237	$ 13,025	$ 134,130
2024	$ 11,960	$ 2,237	$ 14,197	$ 148,327
2025	$ 12,429	$ 2,237	$ 14,666	$ 162,993
2026	$ 12,770	$ 2,237	$ 15,007	$ 177,999
2027	$ 13,630	$ 2,237	$ 15,867	$ 193,866
2028	$ 13,558	$ 2,237	$ 15,795	$ 209,660
2029	$ 13,910	$ 2,237	$ 16,147	$ 225,808
2030	$ 14,328	$ 2,237	$ 16,565	$ 242,373
2031	$ 14,758	$ 2,237	$ 16,995	$ 259,368
2032	$ 15,235	$ 2,237	$ 17,472	$ 276,839
2033	$ 15,656	$ 2,237	$ 17,893	$ 294,732
2034	$ 16,126	$ 2,237	$ 18,363	$ 313,096
2035	$ 16,611	$ 2,237	$ 18,848	$ 331,943
2036	$ 17,147	$ 2,237	$ 19,384	$ 351,327
2037	$ 17,622	$ 2,237	$ 19,859	$ 371,187
2038	$ -	$ -	$ -	$ 371,187
Total	$ 315,262	$ 55,925	$ 371,187	
NPV 2010$	$ 101,524	$ 20,257	$ 121,782	