Testimony of

Michael Kirkwood, General Manager

Q. Can you detail Pascoag's power portfolio for 2013?

A. M. Kirkwood Pascoag's power portfolio for 2013 is detailed in ***Table 3***, below:

Table 3

Pascoag Utility District 2013 Power Entitlements

NYPA	33%	(Hydro)
Miller Hydro	3%	(Hydro)
Spruce Mountain	3%	(Wind)
Seabrook	23%	(Nuclear)
NextEra	7%	(virtual gas-fired)
Constellation	31%	(mostly Fossil Fuel)
	100%	

The total renewable/sustainable power in this portfolio is 39%. This represents mostly hydro power, with one wind entitlement, Spruce Mountain, estimated to contribute 3% of the District's total annual purchased energy in 2013.

Pascoag's non-carbon based energy is 62% of its total energy requirements and includes a mix of the previously mentioned hydro and on-shore wind, together with nuclear power from Pascoag's Seabrook entitlement. The remaining 38% is mainly fossil fuel based energy through a 3-year contract Pascoag entered into with Constellation Energy in 2011, a supplemental agreement reached with Constellation Energy that began in January of 2013, and a virtual gas-fired unit transaction reached with NextEra Energy Power Marketing that began in June of 2013. ***Testimony Exhibit 1-MRK*** highlights this in graphic form.

Q. Please update the Commission on the District's on-shore wind entitlement, Spruce Mountain.

A. M. Kirkwood Patriot Renewables, LLC, headquartered in Quincy, Massachusetts has developed and constructed a wind powered facility in Woodstock, Maine that entered commercial production in December of 2011. This project, known as Spruce Mountain Wind, LLC, consists of ten wind turbines, each having a nameplate rating of approximately 2 MW's.

Energy New England ("ENE") contacted several public power systems in New England in 2010 about this particular project, and thirteen including Pascoag responded positively to the opportunity to participate. The capacity of the plant, approximately 20 MW's, is expected to sustain a thirty-seven percent capacity factor. Pascoag's share of the plant output is expected to be approximately 1,700 MWh each year. Pascoag's share of the facility output is 2.6% of the total plant output.

Although the price in the agreement is set at $99.25/MWh per the basic energy delivered to Pascaog, there are some offsets that will reduce the bottom line cost. In fact, ENE, on behalf of Pascoag was able to sell RECs from the 1st and 2nd quarters of 2013 to EDF Trading North America LLC for $64.40/REC, for an effective contract price of **$34.85** for each MWh received from Spruce Mountain. ENE has reached a verbal agreement with EDF for the 3rd and 4th quarters of 2013 for $63.50/REC for an effective contract price of **$35.75** for each MWh received. While future REC values are currently difficult to estimate due to uncertainty regarding the large offshore Cape Wind project, over the next few years REC values are anticipated to remain over $30, resulting in an attractive bottom line purchase for Pascoag and its customers. The term of this contract is fifteen years. ***Testimony Exhibit 2-MRK*** is a copy of this contract.

Q. Please provide an update on some of Pascoag's other power purchase agreements.

A. M. Kirkwood Pascoag has an important hedging contract with Constellation Energy for the years 2012 through 2014 and in addition, Pascoag entered a supplemental hedging contract with Constellation for the period January 2013 through December 2014. Together, these contracts, which provide a type of supply arrangement called Load Following Energy, were both signed after a competitive bidding process run by ENE on behalf of Pascoag, and was the result of ENE and Pascoag strategizing that market energy prices for the next few years were at a very attractive level due to the recent drop in natural gas prices in the continental United States. Natural gas prices have been and are expected to continue to stay low compared to fuel oil and other sources of energy due to the ability that natural gas producers now have to extract economic shale gas within the United States. Shale gas reserves are considered to be in abundance in the United States due to recent technologies employed in the industry such as horizontal drilling and fracking that allow economic extraction of this energy supply. Since ISO-NE market clearing prices are predominantly set by natural gas-fired generators which operate on the clearing price margin, Pascoag and ENE theorized that 2011/12 was a beneficial period to test the market for longer term deals in order to lock-in the expectation for low natural gas prices for the next few years, and by correlation, low ISO-NE market clearing prices which track natural gas. Those RFPs turned out to be very successful, allowing Pascoag to lower its Proposed Standard Offer rate for 2012 and again in 2013 as presented in the testimony and exhibits of Ms. Allaire. Natural gas prices have become more volatile recently due to the constrained pipeline capacity to move natural gas into New England, especially during the cold winter months when heating demand is high, but all in all, the overall shale gas revolution has brought much more cost-effective supplies to New England, on average, than was contemplated even as little as five years ago.

The Constellation contracts provide very efficient Load Following Energy at a locked-in rate, such that for each and every hour, Pascoag's estimated load requirement is compared to the hourly output of Pascoag's other firm entitlements (such as Seabrook, NYPA, Spruce Mountain and Miller Hydro). The need (or gap) in each hour over and above the total estimated firm entitlements in that hour is provided by the Constellation contracts. Each kWh Pascoag purchases from Constellation over the three year term of the initial contract is priced at the very attractive rate of 5.99 cents/kWh. In 2013, Pascoag has also been taking Load Following Energy through the supplemental arrangement. The supplemental arrangement price is at an even more beneficial rate of 4.675 cents/kWh. Through May 31 of 2013, the initial and supplemental agreements provided 95% of our requirements over and above our firm entitlements, and from June 1, 2013 through December 31, 2014 the agreements have and will be providing 85% of the gap. In 2013, our total expected kWh's purchased from these contracts together represent 31% of our expected annual load requirement in kWh. An additional important feature of these arrangements is that since the amount we take is variable each hour in order to match our customer load with our power supply more precisely, we will be much less likely in the position of selling excess energy to the ISO-NE market at a price lower than our cost, as sometimes may happen if purchasing firm "around the clock" energy. A copy of the Energy Transaction Confirmations is attached as ***Testimony Exhibit 3-MRK.***

Q. Please describe the mid-term deal Pascoag entered with NextEra Energy Power Marketing?

A. M. Kirkwood For many of the same reasons discussed above related to power markets being competitively priced due to availability of low cost natural gas, ENE negotiated with NextEra Energy Power Marketing (NextEra) in early 2012 for a virtual combined cycle unit power transaction of up to 10-years, on behalf of several public power entities in New England including Pascoag. Originally in 2011 the negotiations were centered on one of NextEra's then wholly owned power plants, the gas-fired RISE combined cycle plant in Johnston, Rhode Island. As it turned out, NextEra ended up selling its ownership interest in the RISE plant to another entity in early 2012. The NextEra power marketing team was still very interested in consummating a transaction with public power entities through its discussions with ENE, and the parties settled their discussions on a virtual transaction of 10 years that will replicate all the characteristics of a very efficient gas-fired combined cycle unit, in which the variable costs will be calculated using actual natural gas costs as an input, and applying a very favorable 7.31 MMBTU/MWh heat rate, plus variable component, a fixed fuel component and a very beneficial fixed capacity charge. The energy is in the form of a call-option, during on-peak hours only, meaning the entitlement holders will decide each day whether the contract pricing is "in the money", and will schedule only cost-effective energy during the on-peak hours accordingly. Pascoag has agreed to a 1MW transaction under this virtual arrangement, with the net result that the total of the energy and capacity charges will replicate a very efficient combined-cycle gas-fired generating unit at a capacity rate that reflects the ongoing expected surplus in the ISO-NE Forward Capacity Market. In effect, the timing of this transaction was ideal in that it captured the economics of low cost energy priced at the rate of an efficient natural gas plant, with the beneficial timing of surplus generating capacity in New England providing a much discounted forward capacity rate. A copy of the agreement between NextEra Energy Power Marketing and Pascoag is included as ***Testimony Exhibit 4-MRK.***

Q. Please update the Commission on Pascoag's Restricted Fund for Capital and Debt Service, and what, if any, fiscal issues Pascoag encountered during the past few years.

A. M. Kirkwood As in most years since inception of the Capital Restricted Reserve Fund in 2004, Pascoag successfully funded the annual requirement of this fund. In 2011, however, due to insufficient revenues to cover all operating and capital costs, Pascoag requested the Division to allow it to fund the 2011 Restricted Capital account to the lower level of $185,000, and the 2012 Restricted Capital account to $62,500. The Division supported and the Commission approved such request. Subsequently, Pascoag's new rates were put into effect in 2013 pursuant to the approval received in Docket 4341, and Pascoag has once again been funding the Capital Restricted Fund to the now approved level of $306,200 per year.

The establishment of this restricted fund in 2004 has allowed Pascoag to purchase needed capital items, including vehicles such as bucket trucks, with no new debt service obligations and also to pay off its debt obligations. In fact, the electric department currently has no long-term debt.

<u>Q. Has Pascoag done anything else that would improve its fiscal position and rate stability?</u>

<u>A. M. Kirkwood</u> The District has EEI Master Power Purchase and Sales Agreements in place with TransCanada, NextEra Energy, Constellation Energy and Macquarie Energy. These documents improve Pascoag's position in contract negotiations, and once created, can be easily modified to include the District's other energy suppliers. The agreements streamline the negotiation process by ensuring Pascoag's credit worthiness to potential new partners. In fact, it was the use of EEI Master Agreements which allowed the competitive solicitation that resulted in the beneficial Load Following Energy deals with Constellation Energy discussed above. These EEI Masters allow the parties to transact quickly based on market conditions at the time the transactions are priced.

Additionally, Pascoag management recognized early in 2011 that revenues were inadequate to cover operating and capital costs completely and instituted a restriction on significant operating and capital expenditures for 2011 and 2012 so that we could manage our way through this financially challenging period. We made such budgetary cuts only with expenditures that did not jeopardize the safety or reliability of our customers and employees, and in fact were able to operate through substantial fiscal challenges such as Tropical Storm Irene. Since Pascoag had not had a base rate change since 2004, Pascoag hired a cost-of-service consultant, B&E Consulting LLC, and pursuant to the resulting work product filed a rate change request with the Commission and Division in 2012 under Docket 4341. Pascoag entered into a settlement agreement with the Division, which was approved by the Commission pursuant to Order No. 20977 with an effective date of February 1, 2013. This order allows Pascoag to collect a total annual cost of service of $2,540,035 including funding of our Restricted Fund for Capital of $306,200 per year, greatly improving Pascoag's operational cash flow and ability to provide for its capital needs.

Finally by way of important information regarding Pascoag's fiscal health, Standard and Poor's has re-affirmed the District's "A-"credit rating in 2013 based on the results of their annual review and rating of our company. Pascoag has now maintained an A- rating with S&P from 2008 to the present.

<u>Q. Pascoag's Standard Offer Rate is estimated to increase from $0.03550/kWh in 2013 to approximately $0.072 in 2014. Would you comment as to why the Standard Offer Rate is essentially doubling?</u>

<u>A. M. Kirkwood</u> Yes, two things are driving this difference.

First, going into February 1, 2013 when our latest Base and Standard Offer rates were put into effect, a previous period overcollection of approximately $394,000 was returned to our customers during 2013. This return of the overcollection had the impact of lowering the Standard Offer Rate compared to actual power costs by approximately $0.007/kWh in 2013. Moving into 2014, we anticipate that we will need to recover an undercollection of power costs for the prior period of approximately $580,000 (see J. Allaire's Schedule C-2), which in itself has the impact of increasing our

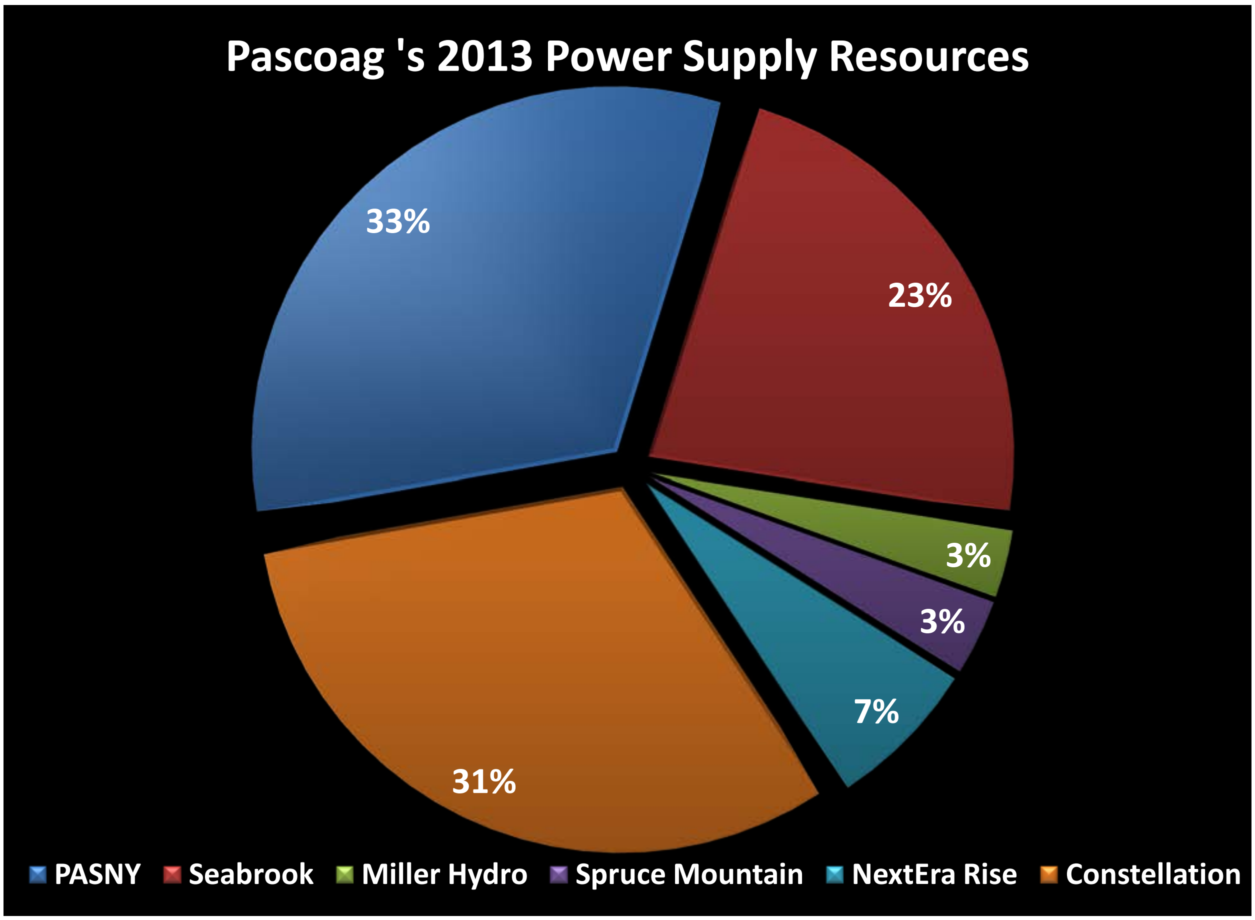
Standard Offer rate by approximately $0.01/kWh over anticipated power costs. The net effect of the comparison of 2013 to 2014 Standard Offer rates is an increase of approximately $0.017/kWh.

Second, due to the current and anticipated increase in natural gas and other power costs for the winter period, especially in gas-pipeline restricted New England, we are building the anticipated market power increases in to our power cost projections for 2014 for some of the energy we purchase. As an example, for Pascoag, the anticipated increase in natural gas prices impacts both our purchases of Day Ahead and Real Time energy from ISO-NE (where natural gas units are generally on the margin setting the clearing prices) as well as our NextEra Virtual RISE power contract, where the energy component escalates or de-escalates to follow as-occurring natural gas prices. In addition, changes to NEPOOL market rules are also having an impact on our overall billings from ISO-NE for 2014. As an example, the ISO recently was granted approval by FERC to purchase reliability contracts from generators (and some DSM providers) for mostly oil fired capacity to increase grid reliability should natural gas pipelines be deficient this coming winter. This action alone is resulting in an increase of $78.8 million in power costs for New England to cover reliability concerns. All load-based entities in New England, including Pascoag, will be paying for this increase based on each entity's load ratio share.

<u>Q. Does this conclude your portion of the testimony?</u>

<u>A. M. Kirkwood</u>

Yes it does.


Pascoag 's 2013 Power Supply Resources
33%
23%
3%
3%
7%
31%
PASNY
Seabrook
Miller Hydro
Spruce Mountain
NextEra Rise
Constellation

POWER PURCHASE AGREEMENT

FOR

UNIT CONTINGENT ENERGY, CAPACITY AND RENEWABLE ENERGY CERTIFICATES

BETWEEN

PASCOAG UTILITY DISTRICT

AND

SPRUCE MOUNTAIN WIND, LLC

Confirmation Letters for:

Constellation Load Following Energy

Supplemental Load Following Energy

POWER SUPPLY CONTRACT

BETWEEN

PASCOAG UTILITY DISTRICT

AND

NEXTERA ENERGY POWER MARKETING, LLC