

December 19, 2012

VERSO ANDROSCOGGIN LLC
Request for Certification for RPS Eligibility

ORDER GRANTING NEW
RENEWABLE RESOURCE
CERTIFICATION

WELCH, Chairman; LITTELL and VANNOY, Commissioners

I. SUMMARY

We certify as a Class I New Renewable Resource the output of the Verso Androscoggin LLC (Verso) recovery boiler No. 1 (RB1) in Jay, Maine as eligible to satisfy Maine's new renewable resource portfolio requirement pursuant to Chapter 311, § 3(B) of the Commission's rules. This certification is for the generation from the steam produced by the combustion of renewable biomass in RB1, pursuant to the calculation specified in this Order.

II. BACKGROUND

A. New Renewable Resource Portfolio Requirement

During its 2007 session, the Legislature enacted an Act To Stimulate Demand for Renewable Energy (Act). P.L. 2007, ch. 403 (codified at 35-A M.R.S.A. § 3210(3-A)). The Act added a mandate that specified percentages of electricity that supply Maine's consumers come from "new" renewable resources.¹ Generally, new renewable resources are renewable facilities that have an in-service date, resumed operation or were refurbished after September 1, 2005. The percentage requirement starts at one percent in 2008 and increases in annual one percent increments to ten percent in 2017, unless the Commission suspends the requirement pursuant to the provisions of the Act.

As required by the Act, the Commission modified its portfolio requirement rule (Chapter 311) to implement the "new" renewable resource requirement. *Order Adopting Rule and Statement of Factual and Policy Basis*, Docket No. 2007-391 (Oct. 22, 2007). The implementing rules designated the "new" renewable resource

¹ Maine's electric restructuring law, which became effective in March 2000, contained a portfolio requirement that mandated that at least 30% of the electricity to supply retail customers in the State come from eligible resources, which are either renewable or efficient resources. 35-A M.R.S.A. § 3210(3). The Act did not modify this 30% requirement.

requirement as “Class I”² and incorporated the resource type, capacity limit, and the vintage requirements as specified in the Act. The rules thus state that a new renewable resource used to satisfy the Class I portfolio requirement must be of the following types:

- fuel cells;
- tidal power;
- solar arrays and installations;
- wind power installations;
- geothermal installations;
- hydroelectric generators that meet all state and federal fish passage requirements; or
- biomass generators, including generators fueled by landfill gas.

In addition, except for wind power installations, the generating resource must not have a nameplate capacity that exceeds 100 MW. Finally, the resource must satisfy one of four vintage requirements. These are:

- 1) renewable capacity with an in-service date after September 1, 2005;
- 2) renewable capacity that has been added to an existing facility after September 1, 2005;
- 3) renewable capacity that has not operated for two years or was not recognized as a capacity resource by the ISO-NE or the NMISA and has resumed operation or has been recognized by the ISO-NE or NMISA after September 1, 2005; or
- 4) renewable capacity that has been refurbished after September 1, 2005, and is operating beyond its useful life or employing an alternate technology that significantly increases the efficiency of the generation process.³

² The “new” renewable resource requirement was designated as Class I because the requirement is similar to portfolio requirements in other New England states that are referred to as “Class I.” Maine’s pre-existing “eligible” resource portfolio requirement is designated as Class II.

³ The 125th Maine State Legislature recently amended 35-A M.R.S.A. § 3210, sub-section 2, B-4, to provide additional guidance on the meaning of the term refurbish. The new language states that “‘to refurbish’ means to make an investment in equipment or facilities, other than for routine maintenance and repair, to renovate, reequip or restore the renewable capacity resource.” P.L. 2011, Ch. 413, § 1.

Chapter 311, section 3(B)(4) of the Commission's rules, establishes a certification process that requires generators to pre-certify facilities as a new renewable resource under the requirements of the rule and provides for a Commission determination of resource eligibility on a case-by-case basis.⁴ The rule contains the information that must be included in a petition for certification and specifies that the Commission shall provide an opportunity for public comment if a petitioner seeks certification under vintage categories 2, 3 and 4. Finally, the rule specifies that the Commission may revoke a certification if there is a material change in circumstance that renders the generation facility ineligible as a new renewable resource.

B. Petition for Certification

On June 18, 2012, Verso Androscoggin LLC (Verso), subsidiary of Verso Paper Corporation, filed a petition to certify the renewable generation from the steam produced by Recovery Boiler 1 (RB1) located at the Androscoggin Paper Mill in Jay, Maine as a Class I New Renewable Resource under the refurbishment provision of the Commission's renewable portfolio rules. Ch. 311, § 3(B)(3)(d). After a protective order was issued by the Commission Staff, Verso supplemented its petition with confidential documents on July 25, 2012. Staff issued three information requests and Verso responded with additional filings on October 4th, October 17th, November 2nd, November 8th, and November 14th. As required by our rules, the Commission provided interested persons with an opportunity to comment on Verso's Petition, but no comments were submitted. The record in this case consists of these filings made by Verso.

The renewable generation facility at issue in this proceeding is the renewable output of Recovery Boiler Number 1 (RB1) and the three turbine generators it feeds (Verso Androscoggin Facility).⁵ RB1 is a multi-fuel boiler that primarily burns biomass as the organic and combustible component of black liquor to produce steam.⁶ The three turbine generators fed by RB1 include: Turbine Generator Number 1 (TG1), a

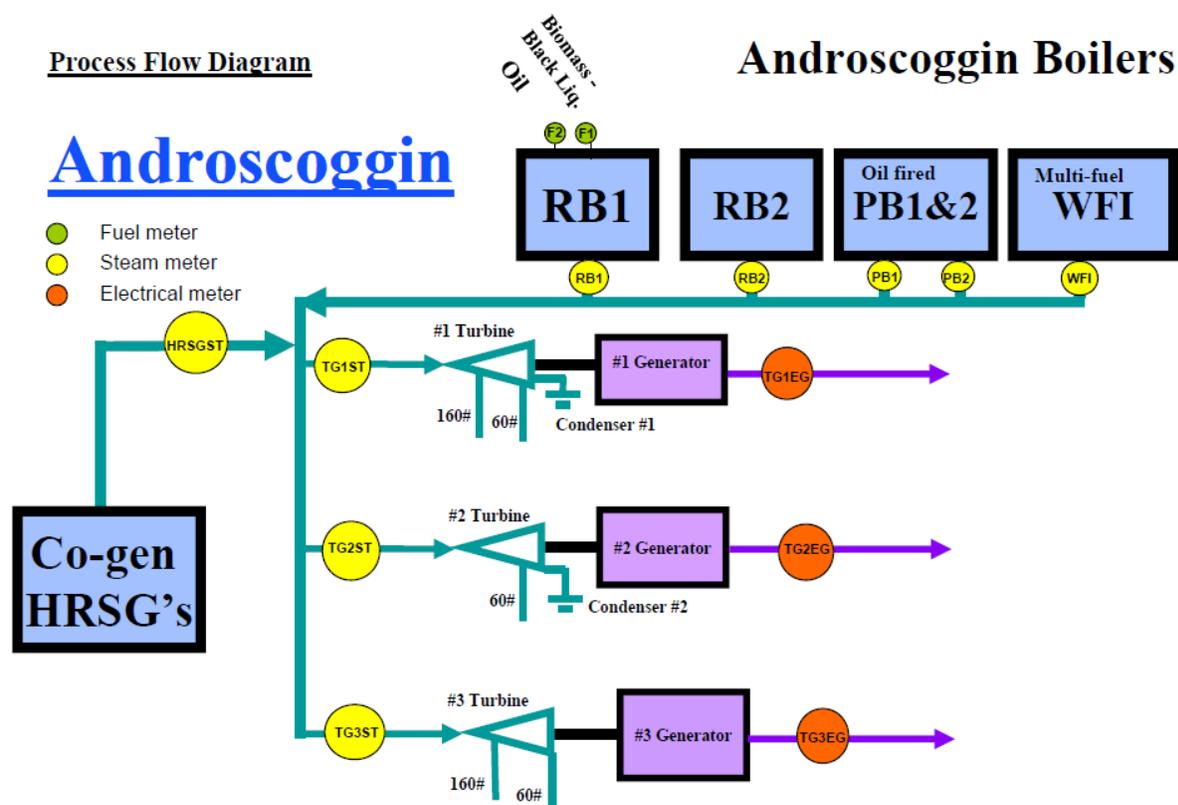
⁴ In the *Order Adopting Rule* at 6, the Commission noted that a request for certification can be made at any time so that a ruling can be obtained before a capital investment is made in a generation facility.

⁵ RB1 is one of several steam generation sources contained in the Androscoggin Paper Mill. The Mill also produces steam from two oil-fired boilers, several natural-gas fired boilers, Recovery Boiler Number 2 (RB2), and a waste fuel incinerator (WFI). This steam feeds into TG1, TG2, and TG3 along with steam from RB1. RB2 and the WFI also burn some renewable fuel to produce renewable steam, but Verso has not sought Class I certification of these steam generation sources. The Commission has determined that a portion of a renewable generation facility can be certified as a Class I eligible resource. See *Order Granting In Part and Denying In Part New Renewable Resource Certification* in Docket No. 2012-81.

⁶ Verso stated in its Petition that RB1 is fueled by black liquor "nearly 100% of the time, with auxiliary fuel (recycled oil) being used only for startup, shutdown, and upset conditions." Petition at 2.

47 year old (1965) steam turbine with a nameplate capacity of 25 MW; Turbine Generator Number 2 (TG2), a 45 year old (1967) steam turbine with a nameplate capacity of 25 MW; and Turbine Generator Number 3 (TG3), a 36 year old (1976) steam turbine with a nameplate capacity of 30 MW. According to Verso, the steam produced by RB1 normally generates an average of between 12 MW and 15 MW of total electricity from the three turbine generators. In addition to the use of steam for electrical generation, steam extractions from these turbines provide steam for the Mill's paper making process (Figure 1).

Figure 1. Schematic illustrating the Verso Androscoggin energy generation facility. The process flow diagram indicates how steam will typically flow from the various boilers to TG1, TG2, and TG3. Note that the co-gen HRSGs (Heat Recovery Steam Generators) are natural gas fired boilers.



According to Verso's Petition, RB1 was originally installed in 1965 and underwent its first major refurbishment in 1986. Verso states that RB1 underwent a second major refurbishment after September 1, 2005. The petition indicates that the sum of all capital expended on RB1 and its associated generators eligible as post-September 2005 refurbishments total approximately \$25.64 million. These investments include a new stacked air system, an upper boiler furnace upgrade including replacement of the upper two-thirds of the boiler furnace, a new boiler roof, a new boiler burner ignition system, new refractometers, new stack breaching, new sootblowers, new fuel delivery piping, a new continuous emission monitoring system, replacement of conveyor, guides, and other steelwork of the east precipitator collection conveyor,

turbine generator #1 Mark VI exciter upgrade, and replacement of the lower front wall tube of RB1.

Verso also states that the useful life of a boiler such as RB1 is 20 years and as a sole result of these investments, RB1 and its associated steam turbine-generators are now operating beyond the renewable energy facility's previous useful life. Petition at 2; Oct. 17, 2012 Affidavit of William R. Spangler at ¶ 10.

In its Petition, Verso proposes a formula to calculate the electricity production from the Verso Androscoggin Facility based upon its proportionate renewable steam production from RB1. The formula partitions the eligible steam from RB1 from steam produced from other sources at the Androscoggin Mill, and applies this fraction to the total electrical generation output of the three turbines to arrive at the electrical generation attributable to the steam produced by RB1 from eligible renewable fuel.

III. DECISION

A. New Renewable Resource Certification

After considering Verso's Petition and the additional information provided by Verso in response to Staff's questions, we find that Verso's RB1 has been refurbished pursuant to Chapter 311, section 3(B)(3)(d), and therefore its output qualifies as a Maine Class I New Renewable Resource. Our decision to grant Class I certification for the Verso Androscoggin Facility is based upon our finding that Verso has satisfied each of the following elements of Class I New Renewable Resource eligibility: (1) Resource Type; (2) Capacity Limit; and (3) Vintage.

1. Resource Type

Verso's petition states that RB1 is fueled by "black liquor" nearly 100% of the time, with auxiliary fuel (recycled oil) being used only for startup, shutdown, and upset conditions. Verso seeks Class I certification for only the portion of the generation derived from black liquor.

We find that the black liquor fuel burned in RB1 is an eligible renewable resource under the definition of biomass set forth in our Order Adopting Chapter 311 and reiterated in our Order Granting New Renewable Resource Certification for the Lincoln Paper and Tissue biomass facility because the heat generating portion of black liquor is a combustible and organic byproduct of the wood pulping process.^{7,8}

⁷ In the Commission's Order adopting Chapter 311, the Commission concluded that, "without further legislative direction and in light of the unqualified statutory term "biomass," the Commission would adopt a relatively broad definition that includes all fuel derived from wood and wood byproducts (along with other organic sources)." *Public Utilities Commission Amendments to Portfolio Requirement Rule (Chapter 311)*, Docket

2. Capacity Limit

Chapter 311, section 3(B)(2) provides that a new renewable resource other than wind must not have a nameplate capacity that exceeds 100 MW. The total nameplate capacity of the entire Verso Androscoggin Mill (TG1, TG2 and TG3) is 80 MW and therefore does not exceed this limit. Therefore, the renewable portion of the nameplate capacity is also within the 100 MW limit.

3. Vintage

Verso seeks certification under the refurbishment prong of the vintage criteria contained in Chapter 311, section 3(B)(3)(d). This refurbishment prong is also contained in the definition of “New” as applied to any renewable capacity resource in 35-A, MRSA § 3210(2)(B-4). The refurbishment prong defines a new renewable resource as a generation facility that:

Has been refurbished after September 1, 2005 and is operating beyond its previous useful life or is employing an alternate technology that significantly increases the efficiency of the generation process.

This prong is a two part test that requires the Commission to first determine whether the facility has been “refurbished,” and then to determine whether the facility is operating beyond its previous useful life or employing an alternate technology that significantly increases the efficiency of the generation process.

To clarify the meaning of refurbishment, the Legislature recently enacted an amendment to the refurbishment prong of the vintage requirement. Pursuant to the statutory amendment, “to refurbish” means “to make an investment in equipment or facilities, other than for routine maintenance and repair, to renovate, reequip or restore the renewable capacity resource.” 35-A M.R.S.A. § 3210(2)(B-4).⁹

No. 2007-397, Order Adopting Rule and Statement of Factual and Policy Basis (Oct. 27, 2007).

⁸ In the Commission’s Order certifying the Lincoln Paper and Tissue biomass facility as a Class I New Renewable Resource, the Commission found that the fuel used in the Lincoln facility, including wood waste, process sludge and black liquor, constituted biomass under Maine’s RPS law. *Lincoln Paper and Tissue, LLC Request for Certification for RPS Eligibility*, Docket No. 2008-173, Order Granting New Renewable Resource Certification at 6 (Jan. 27, 2009).

⁹ The Commission interprets this language as making “explicit the Commission’s existing practice of disregarding investments made for routine maintenance and repair when looking at whether a facility has been refurbished.” *Verso Bucksport LLC Request*

As stated by the Maine Law Court, the purpose of the refurbishment provision is to encourage the preservation of older existing renewable generation facilities by creating an incentive for owners to make the investments necessary to preserve and extend the useful lives of these older facilities. *Covanta Maine, LLC v. Public Utilities Commission*, 2012 ME 74, ¶ 16 (2012) (Covanta).

Pursuant to the Law Court's analysis in Covanta, in the course of making its determination regarding whether there has been a refurbishment, the Commission must consider the nature and character of the expenditures to determine whether they were made for the purpose of repair or maintenance or for investment in equipment or facilities. *Covanta*, 2012 ME 74, ¶¶ 17, 19.

i. Refurbishment

The Commission's practice in assessing whether a generation facility has been refurbished is to examine a collection of factors, including, but not limited to, the condition of the facility prior to the investments and the nature of the expenditures to determine whether they appear to be related to routine maintenance and repair. While the Law Court found in Covanta that the Commission must make a determination on refurbishment "by examining the nature and character of the expenditures without any quantitative requirement related to the amount spent or the ratio of the expenditures to the total value of the facility,"¹⁰ the Commission still examines the amount of the post-September 1, 2005 expenditures to determine the character of the investment and for purposes of determining whether the investment is more in the nature of routine maintenance and repair. However, in light of the direction provided by the Law Court in Covanta we do not employ any quantitative threshold related to the amount spent.

In its petition, Verso provides a list of capital investments made to Verso's Androscoggin Facility since September 1, 2005 totaling \$23.88 million.¹¹ Most significantly, during the period from 2008 through 2010, Verso replaced the upper two-thirds of the boiler furnace, which was original to the 1964/1965 facility. From 2007 to 2008, Verso installed a new stacked air system in RB1. These two expenditures comprised the majority of the capital investments. Verso also states in the petition that, in addition to other projects, it upgraded the exciter (Mark VI) on TG1, and replaced some of the black liquor fuel delivery piping. We do not make a finding on whether each of the projects included in Verso's filing independently meets the definition of a refurbishment investment. Rather, we find that the nature, character and scope of Verso's investments in RB1 in the aggregate, go beyond routine maintenance or

for Certification for RPS Eligibility, Docket No. 2011-102, Order Granting New Renewable Resource Certification at 7, fn. 10 (Nov. 23, 2011).

¹⁰ *Covanta*, 2012 ME 74, ¶ 17.

¹¹ This value differs from the \$25.64 million stated in the initial petition because \$23.88 million is the total amount of refurbishment expenditures that were capitalized for tax purposes.

repairs, and are consistent with the statutory definition of refurbished. In particular, we find it significant that, in addition to other investments, Verso replaced the majority of the boiler furnace. Accordingly, we find that RB1 has been refurbished.

Furthermore, since the steam output of RB1 feeds into all three turbines at the Mill, we find that the refurbishment of RB1 is sufficient to certify the renewable-based electrical generation derived from the RB1 steam via TG1, TG2, and TG3.

ii. Operation Beyond the Facility's Previous Useful Life

Verso seeks qualification of its investments under the useful life sub-prong of the refurbishment vintage category, stating that the "holistic refurbishment represents an investment . . . to enable the facility to continue operating beyond its previous useful life." Petition at 6.¹²

RB1 is part of the original equipment of the Androscoggin Mill, dating back to 1965. However, in 1986, among other improvements, Verso replaced the lower third of the boiler and installed a new stacked air system. The upper two-thirds of the boiler was not replaced at that time, so capital investments made in 2008-2010 have replaced the original 1964 vintage middle and upper boiler material.

Verso states in its petition that while the actual useful life of a recovery boiler depends upon a condition specific evaluation, the typical useful life of a recovery boiler such as RB1 is 20 years. In support of this contention, Verso provided an affidavit by William R. Spangler, a consultant with 43 years of experience in the pulp and paper industry. Mr. Spangler's affidavit states that while it is very difficult to quantify a "typical" recovery boiler's life cycle, which is site and boiler specific and may range from 10 to 40 years at either extreme, the history of actual major refurbishments provides the best approach in determining the life cycle of a recovery boiler. Mr. Spangler states that the first major refurbishment of RB1 occurred in 1986, 21 years after initial installation, and the second major refurbishment occurred in 2008, 22 years after the former refurbishment, thus indicating that the approximate life cycle of RB1 is approximately 20 years. Mr. Spangler concludes that, but for the refurbishments that Verso performed since September 1, 2005, RB1 would not be operating today and is now operating beyond its previous useful life solely as a result of Verso's refurbishments.

While examination of the timing of investments may provide useful information, we do not necessarily agree that the timing of major investments in a facility is determinative of its useful life. There could be a situation in which a company may decide to make a significant investment in a generation facility for reasons other than extending its useful life and therefore the facility would not necessarily be operating beyond its previous useful life as a result of that investment. In this case, however, the record establishes that RB1 had significant safety and operational issues associated

¹² Verso has not sought certification under the alternative technology sub-prong of the refurbishment category.

with corrosion that, if left unaddressed, would have ended of the useful life of RB1 because it could not have continued to operate safely. Between the Affidavit of Mr. Spangler and Verso's further explanation in response to Information Request No. 2 that simple repairs were no longer an option due to safety concerns about further leaks in the boiler wall, we find that Verso has presented sufficient evidence that the facility had reached the end of its previous useful life.

B. Methodology for Calculating RECs

Verso proposes a proportional method for calculating the REC output of the generation from the Verso Androscoggin Facility that is similar to the method initially approved by the Commission in the Verso Bucksport Biomass Facility certification proceeding.¹³ This method for calculating REC production determines the qualifying MWh output of RECs by prorating the total output of TG1, TG2, and TG3 in each hour by the proportion of steam produced by Class I eligible fuel inputs from RB1 relative to the total steam produced by other fuels (in RB1) and other boilers that feed TG1, TG2 and TG3 (regardless of fuel type) (Proportional Method). The Commission has determined that this type of calculation is favorable for its simplicity, objectivity and replicability, which enables others who have not been involved in this proceeding and who are less familiar with a particular plant to more easily understand and verify the calculation.

Therefore, we certify Verso's RB1 using the Proportional Method, which is calculated on an hourly basis using the following formula:

$$((S_{REW} / S_T) * (G_1 + G_2 + G_3) = RECs$$

Where,

$$S_T = (S_{RB1} + S_{RB2} + S_{WFI} + S_{PB1} + S_{PB2} + S_{HRSG})$$

And,

¹³ The Commission approved the proportional method for calculating the REC output of the Bucksport facility during the first phase of the proceeding. *Verso Bucksport LLC Request for Certification for RPS Eligibility*, Docket No. 2011-102, Order Granting New Renewable Resource Certification at 10-12 (Nov. 23, 2011). After an additional proceeding, the Commission subsequently approved an incremental method for calculating the REC output specific to the Bucksport Facility. See April 5, 2012 Supplemental Order Modifying Renewable Energy Calculation Method, Docket No. 2011-102.

$$S_{\text{REW}} = (F_1 / (F_1 + F_2)) * S_{\text{RB1}}$$

And as defined by,

RECs = Maine Class I Renewable Energy Credits

S_T = Total steam production in klbs

S_{REW} = RB1 renewable steam production in klbs

F_1 = Biomass fuel input to RB1 in total mmbtus

F_2 = Fuel oil input to RB1 in total mmbtus

G_1 = Metered electrical production of Generator #1 in MWh

G_2 = Metered electrical production of Generator #2 in MWh

G_3 = Metered electrical production of Generator #3 in MWh

S_{RB1} = Total metered Recovery Boiler #1 steam production, in klbs
 S_{RB2} = Total metered Recovery Boiler #2 steam production, in klbs

S_{WFI} = Total metered Waste-Fuel Incinerator (bark boiler) steam production, in klbs

S_{HRSG} = Total metered co-gen HRSG steam production, in klbs

S_{PB1} = Total metered Power Boiler #1 steam production, in klbs

S_{PB2} = Total metered Power Boiler #2 steam production, in klbs

For the reasons stated above, and in accordance with the Proportional REC calculation method outlined above, we grant certification of the renewable electrical generation derived from the output of Verso RB1 as a Class I new renewable resource eligible to satisfy Maine's new renewable resource portfolio requirement pursuant to Chapter 311, § 3(B) of the Commission rules.

To the extent that any of the Class I RECs from the Verso Androscoggin Facility are for behind-the-meter generation, we conclude that Verso must retain GIS certificates or otherwise obtain GIS certificates necessary to satisfy Maine's RPS (both the original 30% and the "new" requirement) for that portion of its load that is served by the facility. *See Lincoln Paper and Tissue, LLC, Request for Certification for RPS Eligibility*, Docket No. 2008-173, Order Granting New Renewable Resource Certification

at 8 (January 27, 2009). Verso shall submit to the Commission an annual report by July 1st of each year that demonstrates compliance with this requirement.

Accordingly, we

ORDER

1. That the electrical generation of the Verso Androscoggin Facility derived from the renewable output of RB1 is certified as a Maine Class I New Renewable Resource;
2. That Verso shall use the Proportional Method to calculate qualifying RECs as outlined in the body of this Order;
3. That Verso Androscoggin LLC, on an annual basis beginning on July 1, 2013, shall file with the Commission a compliance report showing the full basis for the calculation of the RECs generated from the Verso Androscoggin Facility. This report should include how the steam and electrical generation metering equipment associated with the Verso Androscoggin Facility including RB1 and TG1, TG2 and TG3 have been calibrated; how the metered data have been reviewed, and (if applicable) corrected for accuracy; and how the mmbtu content of the black liquor and fuel oil combusted in RB1 have been established and verified;
4. That Verso shall submit to the Commission an annual report by July 1st of each year that demonstrates compliance with the requirement that Verso must retain GIS certificates or otherwise obtain GIS certificates necessary to satisfy Maine's RPS (both the original 30% and the "new" requirement) for that portion of its load that is served by the Verso Androscoggin Facility; and
5. That Verso Androscoggin LLC shall provide timely notice to the Commission of any material change in the characteristics or operation of the Verso Androscoggin Facility, including the type of fuel used in the generation process, from that described in the submissions filed by Verso in this proceeding. Verso Androscoggin LLC shall also provide timely notice to the Commission of any material change in the characteristics or operation of other components of the Verso Paper Mill that materially impact the characteristics or operation of the Verso Androscoggin Facility.

Dated at Hallowell, Maine, this 19th day of December, 2012.

BY ORDER OF THE COMMISSION

/s/Karen Geraghty

Karen Geraghty
Administrative Director

COMMISSIONERS VOTING FOR: Welch
Littell
Vannoy

NOTICE OF RIGHTS TO REVIEW OR APPEAL

5 M.R.S.A. § 9061 requires the Public Utilities Commission to give each party to an adjudicatory proceeding written notice of the party's rights to review or appeal of its decision made at the conclusion of the adjudicatory proceeding. The methods of review or appeal of PUC decisions at the conclusion of an adjudicatory proceeding are as follows:

1. Reconsideration of the Commission's Order may be requested under Section 1004 of the Commission's Rules of Practice and Procedure (65-407 C.M.R.110) within 20 days of the date of the Order by filing a petition with the Commission stating the grounds upon which reconsideration is sought. Any petition not granted within **20** days from the date of filing is denied.
2. Appeal of a final decision of the Commission may be taken to the Law Court by filing, within 21 days of the date of the Order, a Notice of Appeal with the Administrative Director of the Commission, pursuant to 35-A M.R.S.A. § 1320(1)-(4) and the Maine Rules of Appellate Procedure.
3. Additional court review of constitutional issues or issues involving the justness or reasonableness of rates may be had by the filing of an appeal with the Law Court, pursuant to 35-A M.R.S.A. § 1320(5).

Note: The attachment of this Notice to a document does not indicate the Commission's view that the particular document may be subject to review or appeal. Similarly, the failure of the Commission to attach a copy of this Notice to a document does not indicate the Commission's view that the document is not subject to review or appeal.