

**BEFORE THE
NEW YORK STATE
PUBLIC SERVICE COMMISSION**

In the Matter of the Verified Petition of
Niagara Generation, LLC For
Rulemaking to Allow for Up To Ten
Percent Glued Wood Within Clean
MRF Fuel To Be Eligible for Use As
Biomass Fuel In the Renewable
Portfolio Program) Case No. 12-E-
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**VERIFIED PETITION OF NIAGARA GENERATION, LLC FOR
RULEMAKING TO ALLOW FOR UP TO TEN PERCENT GLUED WOOD
WITHIN CLEAN MRF FUEL TO BE ELIGIBLE FOR USE AS
BIOMASS FUEL IN THE RENEWABLE PORTFOLIO PROGRAM**

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Dated: March 26, 2012

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Niagara Generation, LLC (“NiGen” or “Petitioner”) respectfully submits this Verified Petition For Rulemaking Allowing Up To Ten Percent of Glued Wood Within Clean MRF Fuel To Be Eligible For Use As Biomass Fuel In The Renewable Portfolio Program pursuant to the Process to Establish the Eligibility of New Resources and Technologies established in the Commission’s April 14, 2009 Order in Case 03-E-0188 (“the RPS Implementation Order”)¹ and the Commission’s November 10, 2010 Order in Cases 09-E-0843 and 03-E-0188² (the “NiGen Order”) and Rule 3.5 of the Commission’s Procedural Rules, 16 N.Y.C.R.R. § 3.5 (2009).

¹ Case 03-E-0188, *Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, Order Approving Implementation Plan, Adopting Clarifications, and Modifying the Environmental Disclosure Program* (issued April 15, 2005).

² Case 09-E-0843, *In the Matter of the Petition of Niagara Generation, LLC for Rulemaking Allowing Clean Wood Separated from Construction and Demolition Waste at Material Reclamation Facilities to be Eligible for*

INTRODUCTION AND SUMMARY OF RELIEF REQUESTED

By this Petition, NiGen seeks to set a limit on the allowable presence of wood containing binders, resins or glues including, but not limited to plywood, particle board, and fiber board (“Glued Wood”) mixed with unadulterated wood to be considered Clean MRF Fuel (“CDD”) that is eligible for use by qualifying biomass facilities utilizing circulating fluidized bed boilers (“Qualifying Biomass Facilities”) in the Renewable Portfolio Standard (“RPS”) Program established in the Commission’s Order dated September 24, 2004 in Case 03-E-0188 (“the RPS Order”).³ The use of CDD as an RPS-eligible fuel was authorized in the NiGen Order. Presently, there is no set standard for the presence of Glued Wood in CDD in order to qualify as an RPS-eligible fuel. NiGen proposes that CDD containing up to ten percent of Glued Wood be considered an acceptable limit for RPS-eligible fuel for the NiGen facility and for similar Qualifying Biomass Facilities..

The availability of CDD as a biomass feedstock has expanded biomass fuels and the feasibility of biomass as a renewable resource, but economical supply continues to be a challenge. As was acknowledged in the ANTARES⁴ Report, the sorting process at MRF or C&D processing facilities is a labor intensive process which involves visual identification of non-wood, plastics and treated wood, among other things. The presence of Glued Wood can also be identified by a visual inspection. By allowing a limited presence of Glued Wood

Use as Biomass Fuel in the Renewable Portfolio Standards Program, and Case 03-E-0188, Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, Order Approving Petition With Modifications (Issued and Effective November 22, 2010).

³ Case 03-E-0188, *Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, Order Regarding Retail Renewable Portfolio Standard* (issued and effective September 24, 2004).

⁴ *Clean Wood Separation from Mixed Construction and Demolition Debris at Material Recycling Facilities: Considerations for the New York RPS*, ANTARES Group Incorporated, June 28, 2010.

within CDD, along with appropriate testing, reporting requirements and performance standards, the goals of the RPS Program and the viability of NiGen's operations and its economic acquisition of biomass fuel would be preserved.

For the reasons discussed below, adoption of this policy would increase the supply of CDD available to NiGen and other operators of Qualifying Biomass Facilities participating in the Commission's RPS program while at the same time diminishing the amount of CDD flowing to landfills. NiGen respectfully submits that the public interest would therefore be well served if the Commission were to allow a limited amount of Glued Wood within CDD to be allowed as RPS-eligible fuel in Qualifying Biomass Facilities. The ten percent limit that NiGen is seeking herein would not cause NiGen to violate either its Title V Air Permit or the Beneficial Use Determination issued by the New York State Department of Environmental Conservation.⁵

BACKGROUND

1. Niagara Generation, LLC

NiGen is the owner and operator of a 51 MW electric generating facility equipped with a circulating fluidized bed boiler in Niagara Falls, New York ("Facility"). NiGen is a majority-owned, indirect subsidiary of U.S. Renewables Group (USRG), one of the largest private equity firms focused exclusively on investments in renewable power, biofuels and clean technology infrastructure. USRG was founded in 2003 and has mobilized more than \$750 million of capital commitments to invest in renewable projects. Included in these

⁵ NiGen's Title V Facility Permit No. 9-2911-00152/00025 was recently renewed with an effective date of March 14, 2012. NiGen's BUD No. 1010-9-32 was issued on November 18, 2011 with a modification to allow additional fuel storage issued on December 28, 2011.

investments was the purchase and renovation of the Facility, which historically burned coal and tire-derived fuel (TDF), allowing it to burn biomass in support of New York State's renewable energy goals.

2. The RPS Program

In the RPS Order, the Commission adopted a policy of increasing the proportion of electricity derived from renewable resources to at least 25 percent of the electricity used by retail consumers in New York State.⁶ As the Commission noted in the press release accompanying the RPS Order, a well designed RPS program will have a number of benefits for New York State:

The policy we are adopting today balances a wide range of interests. Not only will it help us meet our growing demand for electricity, but it also will provide additional benefits by increasing fuel diversity for our state's generation portfolio, reducing our exposure to fossil fuel price spikes and supply interruptions, increasing economic development activity from a growing renewable energy industry, and improving our environment. Our decision today is based on a detailed examination of the costs, benefits, and potential impacts on system reliability of implementing an efficient and forward-thinking renewable energy policy for New York State.⁷

The RPS Order established the RPS program's eligibility requirements for various renewable resources and authorized the New York State Energy Research and Development Agency ("NYSERDA") to purchase renewable energy attributes (commonly referred to as renewable energy credits or "RECs") on behalf of consumers of electricity served by New

⁶ RPS Order, slip op. at 6.

⁷ Commission Press Release No. 04068/03E0188 (issued September 22, 2004).

York's major electric utilities.⁸ The RPS Order limited eligibility in the RPS program for waste to energy facilities to those "derived from fuels identified as eligible biomass, which must be source-separated and separately converted to energy."⁹ In doing so, the Commission recognized that municipal waste is a potentially important energy resource and encouraged the industry to implement practices that would advance the state-of-the-art for waste-to-energy technology to mitigate concerns expressed on the record and make access to RPS incentives more appropriate.

In the 2010 NiGen Order, the Commission approved the use of CDD from C&D Debris Processing Facilities to be used as a source of biomass fuel.¹⁰ The Commission noted that it "is important that such C&D debris does not enter into landfills and that it be reclaimed for reuse in some manner."¹¹

In the RPS Implementation Order, the Commission approved measures to implement the RPS program. The RPS Implementation Order included a process to establish eligibility of additional technologies and resources. Under the process, parties desiring to expand or revise the eligibility requirements would file a petition seeking modification of the requirements.¹²

The Commission also recognized that technologies in existence prior to the RPS Order, but not considered, should be eligible for RPS consideration. Upon consideration and

⁸ Case 03-E-0188, *Retail Renewable Portfolio Standard*, Order Regarding Retail Renewable Portfolio Standard (issued September 24, 2004).

⁹ RPS Order, slip op. at 8.

¹⁰ See NiGen Order.

¹¹ NiGen Order, slip op at 10.

¹² RPS Implementation Order, slip op at 33.

after public comment, the Commission would issue an order, if appropriate, modifying the eligibility requirements set forth in the RPS Order.

3. The Biomass Guidebook

In September 2011, as directed in the NiGen Order, NYSERDA issued a revised Biomass Power Guide¹³ to include additional guidance regarding the inclusion of CDD within the RPS fuel stream. Consistent with the RPS Order, the Biomass Power Guide recognizes that “Clean MRF Fuel” “shall mean clean biomass separated from the mixed waste stream of C&D debris at a permitted MRF or C&D processing facility” (any facility permitted to handle C&D debris).¹⁴ The Biomass Power Guide provides that biomass developers must consult and comply with Part 360 regulations and NYSDEC policies and must seek approval to use the fuel from the NYSDEC Division of Air Resources. The power generation facility must also create a fuel Quality Assurance/Quality Control (QA/QC) Plan, including sampling and testing protocols. NiGen has complied with the Biomass Power Guide requirements, including the submission of its QA/QC Plan to NYSERDA for review.

¹³ *New York State Renewable Portfolio Standard, Biomass Power Guide*, prepared for New York State Energy Research and Development Authority by Antares Group, Inc., Issued September 29, 2011.

¹⁴ *See Biomass Power Guide*, Page 4-3. This is the same meaning as CDD used herein.

ANALYSIS

As previously noted, the Commission's RPS Implementation Order established a process by which the Commission could evaluate additional technologies and resources for inclusion in the RPS Program.¹⁵ This Petition is submitted in accordance with that process.

I. THE COMMISSION SHOULD ISSUE AN ORDER FINDING THAT CDD CONTAINING UP TO TEN PERCENT GLUED WOOD IS ELIGIBLE FOR PARTICIPATION IN THE COMMISSION'S RPS PROGRAM

NiGen seeks an order allowing up to ten percent of Glued Wood to be present in CDD to be eligible biomass fuel for use in Qualifying Biomass Facilities under the Commission's RPS program.

NiGen respectfully submits that allowing CDD to contain up to ten percent by volume of Glued Wood as eligible biomass fuel for participation in the Commission's RPS program is in the public interest for several reasons. First, this minor change to the defined, allowable CDD as eligible biomass is consistent with the policies and requirements expressed in the RPS Order and the NiGen Order. Second, expanding the supply of CDD will enable Qualifying Biomass Facilities, including NiGen, to increase production of renewable energy and support the New York State economy while reducing the amount of C&D waste that must be disposed of in landfills.

¹⁵ RPS Implementation Order, slip op. at 33.

A. Allowing A Small Percentage of Glued Wood within CDD Will Promote The Objectives Of The Commission's RPS Program

Allowing a small percentage of Glued Wood within CDD be used as biomass fuel is consistent with Commission's recognition in the RPS Order that waste is an important energy source and its policy to promote new technologies to allow for additional RPS program participation.¹⁶ The allowable use of a ten percent of Glued Wood within CDD can displace greenhouse gas emitting fossil fuels while reducing the amount of energy-rich waste material taking up space in increasingly limited landfills. Glued Wood is otherwise unrecyclable material that would be deposited into landfills. The Intergovernmental Panel on Climate Change ("IPCC") has indicated as such and has specifically referenced fluidized bed combustion, the combustion technology at NiGen:

Advances in waste-to-energy have benefited from general advances in biomass combustion; thus, the more advanced technologies such as fluidized bed combustion with emissions control can provide significant future mitigation potential for the waste sector. When the fossil fuel offset is taken into account, the positive impact on [greenhouse gas] reduction can be even greater.¹⁷

Thus, consistent with the policies expressed in the RPS Order, allowing a larger amount of CDD to be eligible biomass fuel would promote further reclamation of construction debris for a renewable energy supply, reduce landfill expansion, and reduce greenhouse gases.

¹⁶ RPS Order, slip op. at 8.

¹⁷ Bogner, J.M. Abdelrafie Ahmed, C. Diaz, A. Faaij, Q. Gao, S. Hashimoto, K. Mareckova, R. Pipatti, T. Zhang, *Waste Management, In Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds)], Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

NiGen recognizes that the Commission is concerned with compliance of environmental permitting and NYSDEC regulations. NiGen's use of up to ten percent of Glued Wood within CDD will not cause NiGen to be in noncompliance with either its BUD for C&D Waste or its Title V Air Permit issued by the NYSDEC.¹⁸ The precise percentages of Glued Wood within CDD can be identified through the testing already being implemented in NiGen's QA/QC program. The identification and measure of Glued Wood is reliably accomplished through a visual inspection of the CDD. Recent visual inspection results¹⁹ and the results of a chemical analysis on the CDD received by NiGen are attached hereto as *Exhibit A* and *Exhibit B* respectively.

NiGen is proposing that the allowance of Glued Wood within CDD be permitted only at Qualifying Biomass Facilities, including NiGen, due to the fact that circulating fluidized bed boilers burn at a temperature range that allows for more complete combustion of contaminants than lower temperature units, but limit the emissions of NOx in comparison to other types of facilities, such as stokers, that burn at higher temperatures. NiGen has consulted with ANTARES personnel regarding the use of Glued Wood who have indicated that in their review of available emissions testing results for biomass boilers of the size and configuration comparable to that used in the NiGen Facility, there is no evidence of appreciable increases in regulated emissions for ten percent glued wood admixtures compared to clean wood chip fuels fired in the same boiler. In addition, NiGen recognizes the need to enable the use of performance based standards for determining acceptable fuels and monitor air emissions from

¹⁸ NiGen's BUD permits unadulterated wood combined with up to thirty percent, by volume of Glued Wood, wood containing binders, resins or glues.

¹⁹ The names of NiGen's suppliers have been redacted from this table.

facilities participating in the RPS program. NiGen's continued monitoring of air emissions as part of its QA/QC program will allow for the continued verification of compliance with its Title V permitting requirements.

B. Allowing A Small Percentage of Glue Wood Within CDD To Be Used As Biomass Fuel For The RPS Program Will Promote Biomass Production and the Economy in New York

As the Commission has recognized, achievement of its objective of supplying 30 percent of the state's electricity requirements by 2015 will benefit all residents of New York State by reducing greenhouse gases and by providing more jobs in New York. Biomass generators, including NiGen, will significantly strengthen the ability of New York State to achieve its ambitious objective.

Sources of eligible and economic wood biomass has been scarce and NiGen has been unable to operate at full capacity. NiGen's Facility was selected for the third Main Tier competitive solicitation for an award under the RPS Program. After NiGen made substantial investments to allow for the co-firing of biomass in the Facility, biomass operations commenced on March 25, 2008 and RPS REC sales commenced on May 1, 2008. In the first full year of biomass co-firing, the Facility produced an average of 6.3 net-MW of biomass generation, displacing over 34,000 tons of coal and providing enough renewable power to supply nearly 6,000 homes.

NiGen's supply would be significantly increased, with concurrent increased generating capacity, if up to ten percent of Glued Wood in CDD is allowed for use as RPS-eligible fuel. Thus far, the Facility's best REC eligible output on CDD was approximately 25

MW/hr but would be able to burn up to 30 MW/hr if able to add up to ten percent Glued Wood as an RPS-eligible fuel.

While the allowance of CDD fuel has increased NiGen's fuel supply, there is still a need for a broader, more economical supply base. Remaining quality wood sources are significantly above NiGen's economic procurement costs. NiGen continues to be challenged by the scarcity of wood waste products resulting from reduced wood industry productivity during the economic downturn. Given the continued scarcity of economical wood fuel availability in the region, NiGen has been seeking ways to increase the availability of supply.

In its use of the CDD, NiGen has observed that there is a significant amount of CDD that contains small amounts of Glued Wood that is otherwise being diverted into landfills. While NiGen's air permits and its BUD allow it to utilize up to thirty percent of Glued Wood, there are currently no guidelines as to how much Glued Wood is permitted in order to remain an RPS-eligible fuel source.²⁰ If a small percentage of Glued Wood within CDD would be allowed as an RPS-eligible biomass fuel, NiGen would be able to substantially increase its production of renewable energy, reduce the need for fossil fuels, and improve the Facility's economic viability, while at the same time diminishing the volume of CDD sent to landfills.

NiGen is seeking a ceiling of ten percent of Glued Wood, by volume, within CDD. This percentage has been identified by NiGen as a percentage that is achievable without the need to utilize expensive sorting technology. NiGen would endeavor to keep the percentage as low as possible while maintaining its fuel stock and production at sufficient levels.

²⁰ It is noted that the testing results (Exhibit B hereto) indicates that ten percent of Glued Wood in CDD (as received) meets the fuel specifications in Appendix F of the Biomass Power Guide.

Expanding the REC eligibility to allow for up to ten percent of Glued Wood within CDD would also support job growth in the state. For example, the use of CDD has resulted in the addition of four direct hires at the NiGen plant operating in economically challenged Niagara Falls. NiGen currently employs over thirty personnel and also supports an even greater number of off-site jobs associated with the purchase and delivery of fuel to the Facility. The viability of NiGen's operations through the availability of more economical sources of RPS-eligible fuel will protect these jobs.

CONCLUSION

WHEREFORE, for the reasons set forth herein, Petitioner Niagara Generation, LLC respectfully requests that the Commission issue an Order:

- (i) Allowing up to ten percent of Glued Wood, by volume, within CDD to be eligible for use as biomass fuel in Qualifying Biomass Facilities participating in the Commission's RPS Program; and
- (ii) Directing NYSERDA to make the changes to the Biomass Guidebook required to permit up to ten percent Glued Wood, by volume, in CDD to be used as biomass fuel in Qualifying Biomass Facilities participating in the Commission's RPS Program; and
- (iii) Granting Petitioner such other approvals and consents as are necessary and appropriate.

Respectfully submitted,



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Dated: March 26, 2012

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PUBLIC SERVICE COMMISSION**

STATE OF NEW YORK)
) SS.
COUNTY OF WESTCHESTER)

**VERIFICATION OF
JONATHAN KOCH**

Jonathan Koch, being duly sworn, deposes and says: I am the President of Niagara Generation, LLC (“NiGen”), the Petitioner in this proceeding. I have read the foregoing Petition Of Niagara Generation, LLC For Rulemaking Allowing Up to Ten Percent Glued Wood Within Clean MRF Fuel To Be Eligible For Use As Biomass Fuel In The Renewable Portfolio Standard Program, that I know the contents thereof; and the facts stated therein are true to the best of my knowledge, information and belief.

Jonathan Koch

Sworn to before me this
26th day of March 2012
