

CREDIT OPINION

1 December 2016

Update

Rate this Research >>

Contacts

Clifford J Kim 212-553-7880
 VP-Senior Analyst
 clifford.kim@moodys.com

A.J. Sabatelle 212-553-4136
 Associate Managing
 Director
 angelo.sabatelle@moodys.com

Energy NW - Nine Canyon Wind Project's (WA) (Nine Canyon)

Moody's maintains A2 on Energy NW - Nine Canyon Wind Project's (WA) revenue bonds. Outlook is stable.

Summary Rating Rationale

Energy NW- Nine Canyon Wind Project's (Nine Canyon) A2 rating incorporates its power purchase contracts (PPAs) with ten highly rated participants in the A1-Aa3 range with a weighted average quality of A1 and PPA terms that incorporate many features of traditional 'take or pay' contracts. Washington State's renewable portfolio requirements, demonstrated operating history, and strong liquidity are also factors supportive of the A2 rating. However, the rating also considers Nine Canyon's history of gearbox failures in conjunction with some contractual terms that are atypical relative to traditional 'take or pay' contracts. These atypical terms include an O&M payment cap and ambiguous termination language. Moody's recognizes that certain features like the annual payment cap under the PPAs are a requirement under Washington State law.

Credit Strengths

- » Take-or-pay contracts with participants of A1 weighted average credit quality
- » Long operating experience
- » Strong liquidity
- » State support for renewables

Credit Challenges

- » Atypical contract features include O&M cap and ambiguous termination language
- » Costs including debt service are above market prices

Rating Outlook

The stable outlook considers the project's take-or-pay contract, strong participant credit quality, and robust internal liquidity.

Factors that Could Lead to an Upgrade

- » PPAs are amended to be consistent with traditional 'take or pay' contracts, which we view as unlikely given the state law requirement.

Factors that Could Lead to a Downgrade

- » The project incurs major and sustained operational problems
- » Internal liquidity declines materially
- » Weighted average participant credit quality drops below A1
- » Inability to recover costs under take-or-pay contracts

Key Indicators

Exhibit 1

	2012	2013	2014	2015	2016
Total Sales (mWh)	261,624	228,227	239,391	196,750	244,620
Debt Outstanding (\$'000)	135,712	130,955	119,385	108,750	101,620
Debt Ratio (%)	122.5	124.0	122.7	116.3	112.7
Adjusted Days Liquidity on Hand (incl. Bank Lines)(days)	946	652	569	644	785
Fixed Obligation Charge Coverage (if applicable)(x)	1.07	1.19	0.97	1.04	1.13

Source: Moody's, Issuer

Recent Developments

Recent developments are incorporated into Detailed Rating Considerations.

Detailed Rating Considerations

Revenue Generating Base

Strong Participants But PPA Contains Weak or Unclear Provisions Compared to a Typical JPA's Take or Pay Arrangement

The project benefits from take-or-pay PPAs with highly rated public power participants rated from A1 to Aa3 with a weighted average credit quality of A1. Additionally, the PPA contains many features found in a traditional take-or-pay arrangement whereby the participants have to pay for their respective share of debt service and operating costs, with a 25% step up feature for each phase in case of a participant default and generally does not contain specific project performance requirements.

The PPA also contains terms atypical in a JPA 'take or pay' arrangement, such as an annual payment limit and unclear termination provisions. The payment cap consists of the project's scheduled debt service, annual O&M cap of \$7 million (2006) adjusted by an inflation index, and any credits or debit of any Renewable Energy Production Incentive (REPI) credits. Moody's understands the annual payment limit caps a participant's payment requirements for any given fiscal year, which could delay the step up requirement under the PPA until the next fiscal year. While the cost cap is a material weakness relative to other take or pay projects, Moody's also recognizes that Nine Canyon's historical O&M has been below the cap at \$6.3 million in FY 2015 and \$5.7 million in FY 2016. For FY 2016, operating costs decreased largely because of lower turbine maintenance and component rebuild and gear box costs.

Additionally, the benefits of the 25% step up function for a participant default could be limited since the step up provision is limited to each phase. For example, Phase 3 has five participants, including Grays Harbor County P.U.D. 1, WA (Grays Harbor PUD, A1), which takes 37.5% of the Phase 3's power generation. Hypothetically, if Grays Harbor PUD were to default and the remaining four participants stepped up 25% of their share, Phase 3 would still experience a shortfall of around 22% of its output and cash flows.

Furthermore, Moody's understands that if a specific phase has not been in operations for 12 months and is not capable of returning to operations without capital improvements that make it uneconomic, the off-takers (with 60% approval) could ultimately seek to terminate the nonperforming phase. In such a scenario, Energy Northwest would have to sell all of the applicable assets and use the

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

proceeds to pay down debt and expenses for that specific phase with any remainder given to the applicable participants. In Moody's view, the off-take contractual terms are ambiguous as to whether the participants would be required to pay for any debt that remains outstanding for the applicable phase assuming the PPA is terminated. We understand that Energy Northwest and their legal counsel believe the participants will continue to be responsible for their respective share of any outstanding debt in the scenario described above. In Moody's view, the Project's strong liquidity and demonstrated operating performance serve as important mitigants that help address this contract uncertainty.

Since all three phases are in commercial operation, the only other possible termination events are at stated maturity or for a participant default. Under a participant default, the PPA explicitly states that the defaulting participant remains obligated to pay for its share of the debt service even after PPA termination.

Financial Operations and Position

Project Has Demonstrated Operating History

The project has long operating experience with the earliest Phase reaching commercial operations in 2002. Average unadjusted availability is good at around 97% over the last five years and unadjusted availability for FY 2016 is above the historical average at almost 99%. The project's adjusted availability is higher at an average of around 99% since it excludes events like force majeure. For energy production, the Nine Canyon project generated about 245 GWh of power in FY 2016, which was above the five-year average of 234 GWh and significantly above last year's generation of 197 GWh. We understand the primary causes were improved wind speeds and higher availability.

While the Project has years of operating performance and has maintained good unadjusted availability, Nine Canyon experienced numerous gearbox and main bearing failures for Phase 1 and 2 in the past. Siemens addressed these failures under warranty, which expired in August 2012, and a separate settlement was reached regarding the main bearings in 2010. The Project continues to replace the older gearboxes when necessary and approximately 13 older gearboxes remain out of 49 in total for Phases 1 & 2. Given the expiration of the warranty for Phase 1 and 2, Nine Canyon typically maintains one to four spare gearboxes on site and performs gear oil sampling on a six-month basis. We note there have been a few failures of the replacement gearboxes in FY2014 and FY2015 although none occurred in FY2016.

For Phase 3, the Project has not reported any material problems and Nine Canyon has an extended warranty for this phase that expires in August 2028. The warranty covers major components although it excludes the cost of crane support.

Ultimately, the Project's demonstrated operating performance is a key credit consideration given the unclear termination provision and O&M cost cap. An inability to maintain a sound operational performance would be credit negative.

Support for Renewable Energy But Expensive Power

Nine Canyon benefits from Washington State's renewable portfolio standards which requires load serving entities with 25,000 customers or more to source renewable energy for 15% of retail energy sales by 2020. The Project contributes to the participants' ability to meet their renewable portfolio requirement. Moody's views Washington State's renewable portfolio requirement as an important regulatory incentive for the participants to purchase Nine Canyon's power given the project's more expensive all-in costs. For FY2016, Nine Canyon's reported cost at approximately 6.07 cents/kWh, which is well above the wholesale market price.

Low Debt Service Coverage Typical of Take-or-Pay

Nine Canyon's debt service coverage ratios (DSCRs) have averaged around 1.05 times and the DSCR in FY2016 was above average at 1.13 times. The historically low DSCRs are driven by the project's contractual arrangement, which should ensure at least one times coverage.

LIQUIDITY

The project's minimum liquidity consists of a debt service reserve sized according to the traditional three prong test, a minimum \$750K operating reserve, and a reserve and contingency account. Including the operating and contingency reserves, the project's unrestricted

liquidity totaled 785 days cash on hand at FY2016. Nine Canyon's overall strong liquidity position helps to reduce concerns regarding the PPA's contractual weaknesses.

Debt and Other Liabilities

DEBT STRUCTURE

The project's debt consists of traditional fixed rate, amortizing debt with a final maturity in 2030.

DEBT-RELATED DERIVATIVES

None.

PENSIONS AND OPEB

The project participates in Washington State's statewide, multiple employer Public Employees Retirement System (PERS) pension plan. Nine Canyon's reported net pension liability at FY2016 was less than \$1 million. We understand the project has no OPEB liability.

Management and Governance

The project is part of Energy Northwest, a joint action agency located in Washington State. Energy Northwest oversees the plant and provides operations and maintenance services. A participant committee comprised of the off-takers also oversees each Phase and at least 60% of the participants of that specific Phase must approve certain items like the annual O&M budget, annual operating plans, and the decision to terminate a specific Phase under certain conditions.

Legal Security

Nine Canyon's bonds are secured by a pledge of net revenues of Nine Canyon consisting of all three Phases and have a debt service reserve currently funded with \$9.5 million in cash and investments. Nine Canyon can issue additional debt with 100% participant approval for each project phase and the inclusion of the new debt under the respective PPAs.

Use of Proceeds

Not applicable.

Obligor Profile

The Nine Canyon project is a wind power project that totals 95.9 MW and consists of 63 wind turbines and sells power under take-or-pay contracts. The project was built in three phases (each a Phase) comprising of the 48.1 MW Phase 1, 15.6 MW Phase 2 and 32.2 MW Phase 3. Phase 1 and 2 use Siemens 1.3 MW wind turbines while Phase 3 uses Siemens 2.3 MW turbines. Phase 1 has all ten participants and Phase 2 and Phase 3 has five participants each. Phase 1 individual participant shares range from 2% to 25% while Phase 2 has shares ranging from 6% to 44% and Phase 3 has participant shares ranging from 3% to 38%. The participants consist of highly rated public power entities in Washington State.

Methodology and Scorecard Factors

Moody's evaluates Nine Canyon under the US Municipal Joint Action Agencies methodology, and, as depicted below, the grid indicated rating is A2, which is the same as the A2 assigned rating.

The grid is a reference tool that can be used to approximate credit profiles for public power with generation ownership in most cases. However, the grid is a summary that does not include every rating consideration. Please see the US Municipal Joint Action Agencies methodology for more information about the limitations inherent to grids.

Exhibit 2

Factor	Subfactor/Description	Score	Metric
1. Participant Credit Quality and Cost Recovery Framework	a) Participant credit quality. Cost recovery structure and governance	A1	
2. Asset Quality	a) Asset diversity, complexity and history	Baa	
3. Competitiveness	a) Cost competitiveness relative to market	Baa	
4. Financial Strength and Liquidity	a) Adjusted days liquidity on hand (3-year avg) (days)	Aaa	666
	b) Debt ratio (3-year avg) (%)	Baa	117%
	c) Fixed obligation charge coverage ratio (3-year avg) (x)	Baa	1.05x
Material Asset Event Risk	Does agency have event risk?		
Notching Factors		Notch	
	1 - Contractual Structure and Legal Environment		-1
	2 - Participant Diversity and Concentration		0
	3 - Construction Risk		0
	4 - Debt Service Reserve, Debt Structure and Financial Engineering		0
	5 - Unmitigated Exposure to Wholesale Power Markets		0
Scorecard Indicated Rating:		A2	

Source: Moody's Investors Service

RATINGS

ENERGY NW - NINE CANYON WIND PROJECT

Rating A2
Outlook Stable

Source: Moody's

© 2016 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND CREDIT RATINGS AND RESEARCH PUBLICATIONS PUBLISHED BY MOODY'S ("MOODY'S PUBLICATIONS") MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER 1038836

Contacts

Jamal Mtshali
Associate Analyst
jamal.mtshali@moody's.com

212-553-1486

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454