MOODY'S
INVESTORS SERVICE

CREDIT OPINION
7 April 2020

Update

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RATINGS

CPV Power Plant No.1 Bond SPV (RF) Limited

Domicile	South Africa
Long Term Rating	Ba3
Type	Senior Secured - Dom Curr
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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CPV Power Plant No.1 Bond SPV (RF) Limited

Update following rating affirmation

Summary

CPV Power Plant No. 1 Bond SPV (RF) Limited's (the issuer) credit quality benefits from (1) its long-term power purchase agreement (PPA) with Eskom Holdings SOC Limited (Eskom, B3 negative), the incumbent energy utility in South Africa; (2) backstop support from the Government of South Africa (Ba1 negative) in the event Eskom fails to honour its obligations under the PPA; and (3) our base-case forecast that the debt service coverage ratio (DSCR) will be above 1.60x for most of the project life.

However, the issuer's credit quality is constrained by (1) the limited commercial scale use of concentrator photovoltaic (CPV) technology; (2) some uncertainty surrounding future operations and maintenance (O&M) performance following replacement of Group Five by a subsidiary of juwi Renewable Energies (juwi, unrated), although offset by the involvement of the subcontractor reSA which continues to undertake the majority of O&M activities; and (3) the relative infancy of South Africa's programme to push development of renewable energy.

Exhibit 1
Project overview

Project description	44MWp (36MWac) concentrating photovoltaic solar power project [1]
Location	Western Cape, South Africa
Issuer	CPV Power Plant No.1 Bond SPV (RF) Limited
Offtaker	Eskom Holdings SOC Limited
Regulatory regime	South Africa's Renewable Energy Independent PowerProducer Procurement Programme (REIPPPP) provides a feed-in tariff under a power purchase agreement with Eskom, whose obligations are backed by the Government
Commercial operations date (COD)	Dec-14
PPA expiry	Dec-34
Sponsors	Pele Green Energy - Pele SPV21 (RF) (Pty) Limited (20%); Pele SPV22 (RF) (Pty) Limited (35 %); Public Investment Corporation - CPV Power Plant No. 1 Equity SPV (RF) (Pty) Ltd (40%); the Touwsrivier Community Trust (5%)
Construction contractors	Group Five Construction (Pty) Ltd
Equipment manufacturer	Soitec Solar GmbH
Operations & Maintenance	O&M activities subcontracted by juwi SOLAR ZA O&M 1 (PTY) LTD to reSA Services [2]
Senior debt	Fixed rate ZAR 1 billion
Debt maturity	2029
Projected DSCR metrics [3]	1.63x minimum (Dec-20); 1.81x average over 2020-2022; 1.83x average until maturity
Financial covenants	DSCR: Lockup 1.20x, Default 1.15x

[1] MWp is the peak amount of electrical power, in megawatts (MW) that can be produced by a solar installation. MWac refers to the alternating current capacity (megawatts) of inverters used in the solar installation; [2] A new O&M contract with juwi commenced on April 1st, 2020; [3] Moody's-projected metrics under our base case assumption of one-year P90 production for the full term of the debt.
Sources: Moody's Investors Service, the issuer

Credit strengths

» Long-term PPA with Eskom for all power output and backstop off-taker support from the South African government

» Relatively straightforward O&M requirements

» Amortising debt structure with strong debt service cover on the basis of our one-year P90 resource projection

Credit challenges

» The CPV technology is not widely used on a commercial scale and the potential operational benefits will need to be measured over time

» Concentrix Holdings SAS (Concentrix), formerly Soitec Solar GmbH, the technology manufacturer and sponsor of the Touwsrivier CPV plant (the project), is exiting the solar business and has sold its shares in the project to Pele SPV21 (RF) (Pty) Ltd. However, the project's spare parts strategy is likely to mitigate the long-term impact of Concentrix's exit

» Inflation substantially below our base case assumption of 5.7% per annum would result in lower than expected revenues and pressure financial metrics

Rating outlook

The issuer has a stable outlook on its global scale rating, reflecting (1) our expectation that the remaining remedial and outstanding construction work will be satisfactorily completed and does not pose a material risk to the company's cash flow; (2) our expectation that O&M functions will continue to operate smoothly following the replacement of Group Five; (3) our expectation that direct normal irradiance (DNI) will continue to exceed our one-year P90 forecast; and (4) the PPA and the ultimate support the issuer receives from the South African government. The project structure, as with all Renewable Energy Independent Power Producer Procurement (REIPPP) programme projects, provides some protection for creditors in the event of a material change in the terms of the power off-taker contract.

Factors that could lead to an upgrade

» Successful execution of the remaining remedial and outstanding work and build-up of an O&M track record following the implementation of the new O&M contracting arrangement with juwi.

» A period of stable, predictable operational performance, with production ratios consistently above 95% and O&M costs in line with budget

Factors that could lead to a downgrade

» Operational performance of the project persistently below our base case, such that the DSCR is below 1.40x on a sustained basis

» Faster-than-expected consumption of spare parts, increasing the risk surrounding the project's long-term viability

» Significant changes to the terms of the PPA without successful project recourse to the South African government

» Deterioration in our assessment of the government's ongoing support for upholding the tariffs promised to existing renewable energy assets

Key indicators

Exhibit 2
CPV Power Plant No.1 Bond SPV (RF) Limited

	2015	2016	2017	2018	2019	2020-proj.
Annual DSCR	1.44x	1.53x	1.80x	1.69x	1.74x	1.63x
Production ratio (%)	92%	98%	99%	97%	99%	-
Production (MWh)	69,204	74,364	75,506	70,533	70,394	71,774
Debt service (ZAR m)	139.5	139.5	139.5	139.5	139.5	139.5

[1] Moody's Projections (proj.) are Moody's opinion and do not represent the views of the issuer; [2] Periods are for the calendar year.
Source: Moody's Investors Service, the issuer

Profile

CPV Power Plant No.1 Bond SPV (RF) Limited (the issuer) was formed to finance the project, which is located in the Western Cape of South Africa. The project was developed by Soitec Solar GmbH (now Concentrix Holdings SAS)[1], a subsidiary of the Soitec S.A group (Soitec), under the South African government's REIPPP programme. Power output is contracted for 20 years through a PPA with Eskom, the state-owned incumbent energy supplier. The PPA is supported by the Department of Energy of the Government of South Africa in the event that Eskom does not meet the terms of the PPA.

The 44 MWp (translating to 36 MWac at grid connection) of CPV modules being used at the site were manufactured by Soitec at its automated production facilities in Freiburg, Germany, and San Diego, US. Soitec's CPV technology was in its relative infancy at the time of project construction, with the largest operating site being 1.4 MWp, based in Questa, New Mexico. In January 2015, Soitec announced a strategic refocus away from its solar activities and has ceased manufacturing the technology.

The project is owned by the Pele Green Energy - Pele SPV21 (RF) (Pty) Limited (20%); Pele SPV22 (RF) (Pty) Limited (35 %); Public Investment Corporation - CPV Power Plant No. 1 Equity SPV (RF) (Pty) Ltd (40%); the Touwsrivier Community Trust (5%).

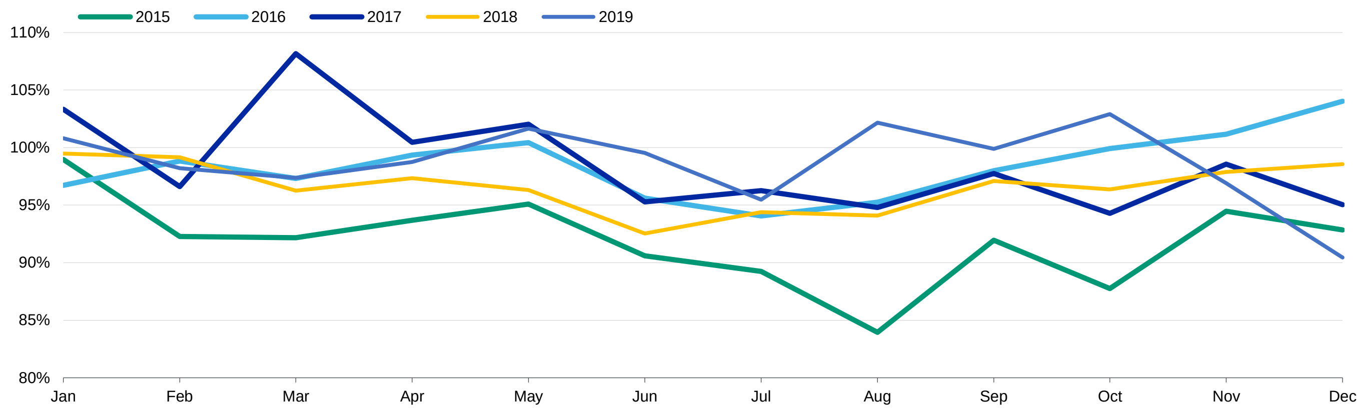
Detailed credit considerations

Operating performance in 2019 improved relative to 2018 despite broadly similar solar resource

From 1 January 2019 to 31 December 2019, the project produced 70,393 MWh (2018: 70,533 MWh), compared with 72,350 MWh under our base-case P90 forecast. The DNI, a measure of solar resource on site, was 2,390 kWh/m2 (2018: 2,467 kWh/m2), compared with a one-year P90 forecast of 2,335 kWh/m2. Production in 2019 was 0.2% lower than that in 2018 mainly because of lower solar resource.

As Exhibit 3 shows, the production ratio — a measure of plant performance — in 2019 was above the 2018 level. The increase in the production ratio in 2019 was because of (1) lower incidence of poor weather that causes the plant to go into storm mode; and (2) resolution of the grid code compliance power quality issues. The production ratio remained above the Group Five production ratio guarantee of 90% (below which Group Five, as O&M contractor, would be liable for penalties) and above the Group Five subcontractor's guarantee of 95%, except for December when it fell down to 90.5%.[2]

Exhibit 3
The project's performance improved in 2019
Production ratio (%)



The production ratio is an expression of the ratio between actual energy and target energy. Target energy is the calculated energy depending on the actual solar irradiation on site, temperature and wind — not the estimated energy in the solar model that served as the basis for the financial model at project inception. Consequently, this is a measure of the technical performance of the plant controlling for the actual meteorological conditions in a given year and could be above 100% if the plant was over-specified.
Source: The issuer

Project finalises new O&M contract with juwi, with existing subcontractor expected to continue O&M services for the foreseeable future

On 1 April 2020, the project commenced a new O&M contract with juwi SOLAR ZA O&M 1 (PTY) LTD to replace the previous contractor, Group Five. Under the new contract, juwi remains liable to the project for obligations under the previous O&M agreement entered into with the project, including for the 90% production ratio guarantee provided by it to the project. The existing subcontract, reSA Services (reSA), continues to provide the majority of on-site O&M services and also continues to provide a 95% production ratio guarantee to juwi under the subcontract.

The replacement of Group Five follows the insolvency proceedings initiated on 13 March 2019. The impact of Group Five's insolvency was mitigated by the direct agreement between the project, Group Five and reSA, which specified that if an event occurs (a contractor default) that would permit the subcontractor to terminate the O&M subcontract, the project shall be entitled to make a payment on behalf of Group Five to the subcontractor and/or to take any action on behalf of Group Five required to cure or remedy any contractor default (for a period of 30 days). The project was also required to maintain a minimum balance of ZAR 15 million within the project proceeds account, to partially mitigate operator handover risk.

Changes to ownership structure are credit neutral

On 27 March 2019, Pele Green Energy acquired Concentrix's 20% equity stake resulting in a 55% ownership stake. This follows a share purchase agreement between the two parties, signed in May 2019, in which Concentrix committed to this share sale. Concentrix's involvement benefited the project primarily through its O&M know-how, which continues through reSA, which includes former Soitec employees in its staff. Because of this, we view the change in ownership as credit neutral.

Minor construction snagging items close to being resolved and unlikely to affect production

Although the commercial operations date (COD) was achieved under the Eskom PPA, there remained remedial and outstanding work that prevented formal acceptance under the construction contracts. Complete acceptance under the initial terms of the Balance of Plant & Implementation Agreement and the Optimization Agreement (that is, the interface agreement) did not take place as initially planned because certain work had not yet been performed or correctly performed, preventing the acceptance testing as contemplated in those contracts. On 8 January 2015, bondholders passed a resolution approving a Remedial and Outstanding Works Agreement (R&O Agreement) to address these faults.

As of April 2020, the only outstanding item under the R&O Agreement related to outstanding “as built” and operating documentation. This documentation was provided by Group Five in November 2018 and during 2019 was audited by two independent engineering parties with remediations noted towards the end of 2019. On 5 February 2020, a proposal was agreed between Group Five and the issuer, which allows for the issuer to remedy the noted remediations by using the outstanding R&O agreement payment milestones. We do not expect this outstanding item to materially affect the project's operations over the next year.

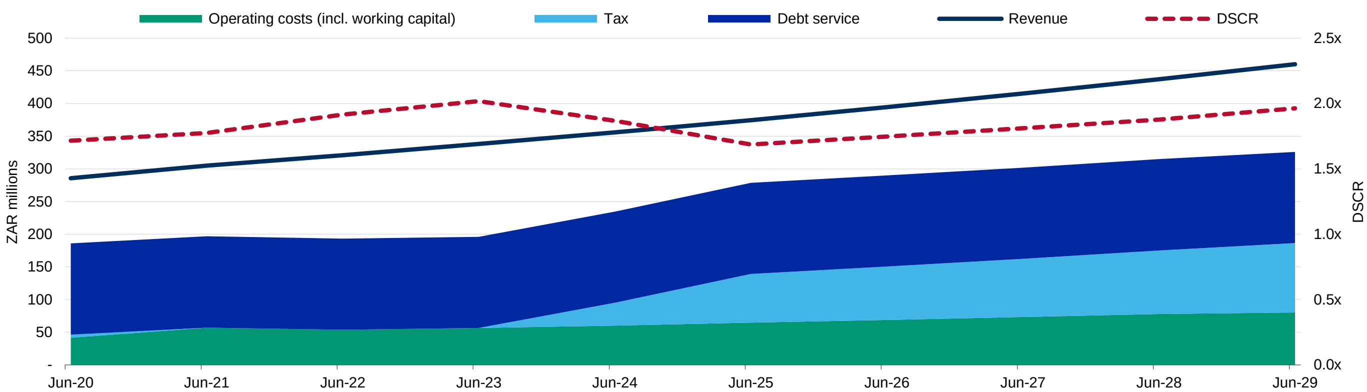
Financial performance improves in 2019 compared to 2018

The project's 2019 cash flow available for debt service of ZAR 240 million was higher than that in 2018. The DSCR for the 12-month period ending December 2019 payment date was 1.74x (2018: 1.69x). The forward-looking 12-month DSCR as of December 2019 under our base case is projected to be 1.63x on the basis of P90 production. The observable dip in the DSCR profile below is a result of an increased tax liability once the tax losses associated with the depreciation of the asset are consumed.

Exhibit 4

Our forecast DSCR

Our base case P90 12-month DSCR



Sources: Moody's Investors Service, the issuer's financial model

Relative to our expectations at financial close, operating costs are forecast to be modestly higher (about 2%) than our initial assumptions, mainly as a result of the new O&M arrangements in place. However, on balance, our forecast financial metrics are somewhat higher than those at the initial rating assignment[3] due to reduced debt service payments because of the fact that the total senior debt raised, at ZAR 1.0 billion, was lower than the initial target of ZAR 1.2 billion. Financial metrics may come under pressure if inflation falls significantly from our base case assumption of 5.7%. To date, average annual inflation since 2014 has been slightly lower at 5.1%.

Mitigants in place to support long-term operations following Soitec S.A.'s exit from its solar activities

Soitec S.A., the parent company of the former project sponsor and technology manufacturer, has exited the solar sector to focus on its core electronics business. Soitec has ceased all manufacturing and R&D activities, which could increase credit risk in the medium to long term, if appropriate mitigants are not in place.

The project implemented a spare parts and new O&M strategy (having received bondholder approval) to address this risk, and we view these mitigants as positive for the operating and credit risk profiles.[4] The project has a spare parts package with the equivalent of 10% installed capacity, or 4 MW (excluding trackers), comprising 1,700 modules. This is in excess of the technical adviser's recommendation for 600 units on site, using a detailed failure rate analysis.

Regulatory regime and revenue model provide a stable cash profile for an operational site

Touwsrivier's output is contracted to Eskom through a PPA, under which Eskom has committed to purchasing all the electricity produced by the facility, subject to a cap at the maximum planned capacity of 36 MWac, across the 20-year PPA life. The contracted power price of ZAR 2,603.14/MWh — indexed annually for inflation (as of year-end 2019, the nominal tariff was around ZAR 3,983/MWh) — is significantly above South African electricity supply prices (there is no open wholesale market), reflecting the government's intention under the REIPPP programme to attract renewable investment in the country.

Project revenue is therefore only subject to successful electricity generation, which is a function of (1) the solar resource; and (2) continued operation of the technology. The resource risk is addressed through an independent assessment of the site's annual solar irradiation, on which financial projections are based. We have considered the one-year P90 resource profile as our base case.

We take comfort from the explicit government support available in the event that Eskom does not meet the PPA contractual terms. Therefore, we do not consider counterparty risk to be a material exposure, at the current project rating level.

CPV technology untested on this scale

The CPV technology uses lenses to concentrate sunlight onto a small area of solar photovoltaic (PV) cells. The technology benefits from higher efficiency — above 40% for Soitec's three-junction technology used, relative to around 20% for conventional silicon PV technology. Furthermore, experience to date indicates lower module degradation levels relative to typical PV modules, which could experience degradation of around 0.5% annually. Despite these factors, the CPV technology has been subject to intense competition as a result of rapid cost reductions in standard PV products. Because of the high fixed costs involved in the manufacturing of the CPV technology, it has struggled to keep up with standard PV, where significant manufacturing economies of scale have been achieved.

Soitec's CPV technology offering was only operational for around five years and on a relatively small scale before Touwsrivier (the largest previous Soitec installation being 1.4 MWp). Also, the CPV system requires direct solar irradiation to work effectively: (1) an automated tracking mechanism is required to maintain a square angle of incidence between the CPV panels and the solar source, and (2) performance can be impaired if there is cloud cover obscuring the solar source.

The technology risk is mitigated by the operating availability protection under the O&M contract, whereby juwi is committed to 90% production ratio targets for the facility, incentivising it to ensure that the necessary cleaning and preventive maintenance procedures are followed. In addition, reSA remains committed to a 95% production ratio guarantee under its subcontract.

National scale rating application

Our national scale credit ratings (NSRs) are intended as relative measures of creditworthiness among debt issues and issuers within a country, enabling market participants to better differentiate relative risks. NSRs differ from our global scale credit ratings (GSRs) in that they are not globally comparable with the full universe of our rated entities, but only with NSRs for other rated debt issues and issuers within the same country. NSRs are designated by a ".nn" country modifier signifying the relevant country, as in ".za" for South Africa. For further information on our approach to NSRs, please refer to our credit rating methodology published in May 2016 titled "Mapping National Scale Ratings from Global Scale Ratings". While NSRs have no inherent absolute meaning in terms of default risk or expected loss, a historical probability of default consistent with a given NSR can be inferred from the GSR to which it maps back at that particular point in time.

NSRs are assigned by applying the published correspondence from GSRs. Where a single GSR maps to multiple national scale ratings, Rating Committees assign higher or lower NSRs to individual issuers and debts depending on their relative credit position within the same GSR category, using the same methodologies as are used to determine the GSRs. The mapping profile for South Africa indicates that a Ba3 GSR maps to an NSR range of A2.za to A3.za. We have assigned an A3.za rating to the project.

Drivers of recovery prospects

In the event of a debt default the project presents moderate recovery prospects reflecting, positively, a well-defined compensation regime, strong structural features, and a relatively long regulatory tail. However, this is offset by the limited commercial track record of the CPV technology compared to other renewable technologies, the relatively new regulatory framework in South Africa, and a weaker legal framework than some other EMEA jurisdictions.

Liquidity analysis

As of 31 December 2019, the project's 12-month debt service reserve account and six-month O&M reserve account met their required contractual levels of ZAR 139.5 million and ZAR 10.0 million, respectively.

Structural considerations

Bondholders benefit from typical project finance protections, including a 12-month debt service reserve account, a six-month O&M reserve account, fully amortising debt, 1.20x historical and forward-looking DSCR test for distributions, and restrictions on additional indebtedness and business activities.

Rating methodology and scorecard factors

Our rating assessment of the issuer is based on the Power Generation Projects Methodology (published June 2018), indicating a Baa3 scorecard indicated outcome before consideration of offtaker credit quality. Due to the backstop support provided by the Department of Energy of the Government of South Africa, the rating is constrained to a maximum level equal to South Africa's Ba1 sovereign rating. As a result, the scorecard indicated outcome for the project is Ba1.

Given the nature of the CPV technology relative to more established PVs, and the recent change to the O&M contracting arrangements, the assigned Ba3 GSR is weaker than the scorecard indicated outcome under the methodology. The GSR of Ba3 maps to an NSR of A3.za.

Exhibit 5

CPV Power Plant No.1 Bond SPV (RF) Limited

Power Generation Projects Industry Grid	Score	
Factor 1 : Predictability and Sufficiency of Cash Flows (30%)	**Measure**	**Score**
a) Quality and Diversity of Cash Flow Stream		Baa
b) Conditions for Contract Payments or Receipt of Revenues		Baa
Factor 2 : Competitiveness / Regulatory Support (15%)		
a) Competitiveness of Contracts Relative to Market / Regulatory Support		Ba
Factor 3 : Technical and Operating Profile (20%)		
a) Technology and Operating Performance		B
b) Sponsor Commitment		B
Factor 4 : Leverage and Coverage (35%)		
a) Debt Service Coverage Ratio	1.83x [1]	Baa
Notching Adjustments:		
a) Liquidity		-
b) Structural Features		-
c) Refinancing Risk		-
d) Construction and Ramp-up Risk		-
e) Priority of Claim, Structural Subordination and Double Leverage		-
Rating:		
Indicated Outcome before Notching Adjustments		Baa3
Notching Adjustments		-
Indicated Outcome before Offtaker Constraint		Baa3
Offtaker Constraint Applied?		Yes
Level of Offtaker(s) Constraint		Ba1
a) Indicated Outcome from Scorecard		Ba1
b) Actual Rating Assigned		Ba3

[1] Average DSCR over full term of the debt under Moody's base case assumptions.
Source: Moody's Investors Service

Ratings

Exhibit 6

Category	Moody's Rating
CPV POWER PLANT NO.1 BOND SPV (RF) LIMITED	
Outlook	Stable
Senior Secured -Dom Curr	Ba3
NSR Senior Secured	A3.za

Source: Moody's Investors Service

Appendix

Exhibit 7
Peer comparison

				Predictability of Cash Flows		Competitiveness / Regulatory Support	Technical & Operating Risks / Vendor Profile		Key Financial Metrics	Notching Considerations					Offtaker constaint	
Issuer	Moody's Rating	Scorecard Indicated Rating	Outlook	Quality & Diversity of Cash Flows	Conditions for Contract Payments or Receipt of Revenues	Competitiveness of Contracts Relative to Market / Regulatory Support	Technology & Operating Performance	Sponsor Commitment	Debt Service Coverage Ratio	Liquidity	Structural Features	Refinancing Risk	Construction & Ramp-up Risk	Priority of Claim, Structural Subordination & Double Leverage	Offtaker Constraint Applied? / Level of Offtaker(s) Constraint	Completion Year [1]
CPV Power Plant No.1 Bond SPV (RF) Limited	**Ba3**	**Ba1**	**Sta**	**Baa**	**Baa**	**Ba**	**B**	**B**	**Baa**	**-**	**-**	**-**	**-**	**-**	**Yes (Ba1)**	**2014**
Breeze Finance S.A. Class A Notes	B2	B2	Sta	Ba	A	Baa	Ba	Ba	Caa	-0.5	-1.0	-	-	-	No	1999-2007
Breeze Finance S.A. Class B Notes	Ca	Caa1	Sta	Ba	A	Baa	Ba	B	Ca	-1.0	-	-	-	-2.0	No	1999-2007
Continental Wind LLC	Baa2	Baa2	Sta	Baa	A	Baa	Baa	Ba	Baa	-	-	-	-	-	Yes (Baa1)	2008-12
Solar Star Funding, LLC	Baa2	Baa2	Sta	Baa	A	Baa	Baa	Aa	Baa	-	-	-	-	-	Yes (Baa2)	2015
Topaz Solar Farms LLC	Caa1	Ba3	Pos	Caa	Caa	B	Baa	Aa	A	-2	-	-	-	-	No	2014
WindMW GmbH	Baa3	Ba1	Sta	Baa	A	Baa	Ba	Baa	Baa	-0.5	-	-0.5	-	-	No	2015

[1] Some projects are made up of a portfolio of plants which were completed over a number of years.
Source: Moody's Investors Service

Endnotes

1 In February 2019, Soitec Solar GmbH merged with its immediate holding company Concentrix Holding SAS (Concentrix). All duties and obligations, including guarantees provided to the Touwsrivier CPV solar project, of Soitec Solar GmbH have been transferred to Concentrix.

2 Production ratio guarantees for the project are provided on a rolling consecutive two-year basis, so a production ratio below the guaranteed level in an individual month does not in itself activate the guarantee.

3 See the Pre-Sale Report, 21 December 2012.

4 See the Issuer Comment Proposed changes to Touwsrivier CPV project's security structure are positive, 13 April 2016.

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