



Report and Recommendation of the President to the Board of Directors

Project Number: 48423-001
June 2015

Proposed Partial Credit Guarantee and Loan AP Renewables, Inc. Tiwi and MakBan Geothermal Power Green Bonds Project (Philippines)

This is an abbreviated version of the document approved by ADB's Board of Directors that excludes information that is subject to exceptions to disclosure set forth in ADB's Public Communications Policy 2011.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 30 April 2015)

Currency unit	–	peso/s (P)
P1.00	=	\$0.0226
\$1.00	=	P44.30

ABBREVIATIONS

ADB	–	Asian Development Bank
AEV	–	Aboitiz Equity Ventures, Inc.
APC	–	Aboitiz Power Corporation
APRI	–	AP Renewables, Inc.
ARI	–	Aboitiz Renewables, Inc.
ASEAN	–	Association of Southeast Asian Nations
DMC	–	developing member country
ECC	–	environmental compliance certificate
GRSC	–	geothermal resource sales contract
MW	–	megawatt
PCG	–	partial credit guarantee
PGPC	–	Philippine Geothermal Production Company, Inc.
PPP	–	public–private partnership
PSALM	–	Power Sector Assets and Liabilities Management Corporation
WESM	–	Wholesale Electricity Spot Market

NOTES

- (i) The fiscal year (FY) of AP Renewables, Inc. ends on 31 December.
- (ii) In this report, "\$" refers to US dollars.

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I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed (i) partial credit guarantee (PCG) of up to P8,025,000,000 of principal and interest thereon to bondholders; and (ii) loan of up to P1,800,000,000 (or its equivalent in US dollars) to AP Renewables, Inc. (APRI) for the Tiwi and MakBan Geothermal Power Green Bonds Project in the Philippines.

II. THE PROJECT

A. Project Identification and Description

1. Project Identification

2. Despite the potential of geothermal power to help overcome the Philippines' electricity shortage with indigenous low-carbon energy, few geothermal power transactions have occurred in the country, mainly due to a lack of risk appetite on the part of developers and lenders. One significant exception has been the privatization and repowering of the Tiwi and Makiling–Banahaw (MakBan) power plant complexes. The facilities—the seventh and fourth largest geothermal power stations in the world, respectively—were developed in the 1970s by the government's National Power Corporation. Originally built with a nameplate capacity of 676 megawatts (MW) (234 MW at Tiwi and 442 MW at MakBan), the facilities had fallen into severe disrepair by the mid-2000s. Effective availability in 2007 was 41% at Tiwi and 63% at MakBan, well below industry standards.¹

3. As part of a broad plan to divest state-owned electricity assets, Tiwi and MakBan were sold through public bidding in 2009 to Aboitiz Renewables, Inc. (ARI), an Aboitiz Power Corporation (APC, or the sponsor) subsidiary and a leading local developer of renewable energy. ARI's acquisition of Tiwi–MakBan was financed on an all-equity basis because, at the time, the company was unable to secure project financing from commercial banks.² In the absence of debt financing, APC not only invested equity in the acquisition but also in plant rehabilitation. By mid-2013, after 4 years of turnaround activities, the sponsor had increased plant availability to above 90%, improved generation efficiency, and significantly extended the plants' operating life. Today, Tiwi–MakBan accounts for 14% of the Luzon grid's dependable capacity of renewable energy.

4. ADB approached APC in August 2014 with a proposal to normalize Tiwi–MakBan's capital structure (i.e., to transition it from an all-equity financing to a more conventional debt–equity mix) through the issuance of a project bond. The structure was proposed as a way to help APC redeploy invested capital for new projects (including renewable power) without undermining the company's ability to raise debt from local banks. The project represents a first effort by ADB in tackling challenges faced by local developers and banks in the Philippines.

2. Sector Overview

5. **Geothermal energy.** The Philippines has an estimated 4,790 MW of potential geothermal capacity. Although only a small part of these resources is being exploited, the country is already

¹ Power Sector Assets and Liabilities Management Corporation (PSALM). 2008. *Information Memorandum: Tiwi Geothermal Power Plant Complex and MakBan Geothermal Power Plant Complex*. Manila.

² During 2008–2009, the Asian Development Bank (ADB) and several Philippine commercial banks considered joint financing, but upon the withdrawal of commercial banks, the transaction was cancelled. The banks' withdrawal was caused by insufficient risk appetite.

the world's second largest geothermal power producer; 11% of the country's installed power capacity (1,868 MW in 2013) is geothermal energy, accounting for 9,605 gigawatt-hours of generation in 2013. The government wants to boost this capacity by 70% by 2030 to reach 3,200 MW. The ambitious target is based on geothermal energy's perceived advantages in environmental performance, energy security, and avoidance of fuel import costs. However, only 20 MW have been added since 2008. Barriers include the high cost of steam exploration, long development lead times, and the small number of experienced local developers and lenders.

6. **Wholesale Electricity Spot Market.** The Philippines' spot market for power, the Wholesale Electricity Spot Market (WESM), was established in 2006 to encourage competition and reduce energy prices. The market follows a gross-offer-pool, net-settlement model, and enables the trading of electricity as a commodity in 24 hourly trading periods. All available power in the system—including contracted capacity sold under bilateral arrangements—is delivered through WESM and prices for spot transactions are set through competitive bidding.

7. **Project bonds.** Decades of low public and private spending have left the Philippines with insufficient infrastructure, even when compared with peer developing member countries (DMCs), and the gap between infrastructure investments and requirements is widening. Bonds are increasingly seen as a way to close the financing gap, as they can match the financing requirements of large infrastructure projects with a growing appetite for long-term assets among institutional investors. Project bonds (i.e., bonds issued to fund specific infrastructure projects) in the Philippine power sector, while still developing, can play a role in funding projects.³ ADB is supporting the expansion of domestic debt capital markets, and working to establish a policy framework for project bonds in the Philippines.⁴

8. **Green bonds.** Green bonds enable the raising of capital for and investments in new and existing projects with environmental benefits, such as renewable energy. Institutional investors in many countries increasingly seek to integrate environmental, social, and governance factors into their investment processes, and green bonds can address such needs.⁵ To qualify as green, a bond issuance should meet voluntary guidelines for impact, additionality, and transparency. One emerging subset of green bonds are climate bonds, whose environmental benefits are certified by an independent standard-setting organization.⁶

3. Project Design

9. The project involves APRI's refinancing of capital expenditure (including acquisition and plant rehabilitation) and ongoing operation and maintenance in Tiwi and MakBan, two major geothermal power generation complexes on Luzon:

³ One notable exception is a 1997 bond for a Philippine power project (Quezon Power) sold to United States investors and refinanced in 2011 with a 5-year bond sold to Philippine banks; both issuances were in US dollars.

⁴ The project would provide direct support to two proposed programs: ADB. Forthcoming. *Concept Paper: Encouraging Investment through Capital Market Reforms Program*. Manila; and ADB. Forthcoming. *Concept Paper: Public–Private Partnership Program Loan Cluster*. Manila. The proposed Encouraging Investment through Capital Market Reform Program will apply sequenced reforms to (i) develop the government bond market as a precursor to developing the corporate and project bond markets, (ii) encourage growth in domestic long-term savings, and (iii) ease barriers to entry to diversify and broaden available sources of long-term finance. The proposed Public–Private Partnership Program will strengthen financial support to PPPs, expand and efficiently implement the pipeline of PPP projects, and strengthen the legal and regulatory frameworks for PPPs.

⁵ Organisation for Economic Co-operation and Development (OECD). 2012. *Defining and Measuring Green Investments: Implications for Institutional Investors' Asset Allocations*. *OECD Working Papers on Finance, Insurance and Private Pensions*. Paris.

⁶ The Climate Bond Initiative, an international partnership between investors, climate experts, and donors, maintains the climate bond standards and certifies bond issuances.

- (i) The Tiwi complex (Tiwi) is located in the province of Albay, about 569 kilometers south of Metro Manila. With a combined installed capacity of 234 MW, Tiwi consists of three power plants with two generating units each. The units were commissioned between 1979 and 1982.
- (ii) The Makiling–Banahaw complex (MakBan) is located about 70 kilometers southeast of Metro Manila on the boundary of Laguna and Batangas provinces. With a combined capacity of 442 MW, MakBan consists of five power plants with a total of 10 generating units. The units were commissioned between 1979 and 1996.

10. Tiwi–MakBan sales are marketed through a mix of bilateral sales agreements and wholesale spot market sales into WESM.

4. The Borrower

11. The borrower, APRI, is the owner-operator of the Tiwi–MakBan plants (its sole operations). APRI was registered in 2007 as a Philippines company, and is wholly owned by the sponsor via an intermediate company, Aboitiz Renewables, Inc.

5. The Sponsor

12. APC, the sponsor, is a leading developer and operator of power generation and distribution assets in the Philippines. It has 2,334 MW of attributable generation capacity, most of which is on the Luzon grid. APC also has substantial interests in seven distribution utilities serving a total of 18 cities and municipalities in Central Luzon, Visayas, and Mindanao, with a customer base of 766,988 in 2014. The company is listed on the Philippine Stock Exchange. For the year ending 31 December 2014, APC reported revenues of P86.8 billion, net income of P18.1 billion, and assets of P216.8 billion. APC is the Philippines' leading hydro developer and its second largest geothermal operator. Over a third of the company's attributable capacity is renewable energy; development of additional renewable energy projects is a core strategic focus of the company.

13. APC's controlling shareholder, Aboitiz Equity Ventures, Inc. (AEV), is a diversified conglomerate listed on the Philippine Stock Exchange. AEV has interests in the electric power, financial services, and real estate sectors, among others. As of March 2014, AEV owns 76.9% of the sponsor's capital stock. For the year ending 31 December 2013, AEV reported revenues of P90.9 billion, net income of P21.0 billion, and assets of P247.1 billion.

B. Development Impacts, Outcome, and Outputs

14. Impacts

- (i) **Development of the private sector bond market in the Philippines.** ADB's credit enhancement will support the issuance of the Philippines' first green project bonds denominated in pesos. If project bonds are deployed at greater scale, they can supplement the bank financing market mobilizing long-term financing from local institutional investors for the public–private partnership (PPP) and infrastructure agendas. The project will also represent an early milestone in the development of a nascent green bond market by seeking third-party certification in accordance with the climate bond standard.

- (ii) **Support investment in geothermal power in the Philippines.** By demonstrating that geothermal power can be financed on a nonrecourse project finance basis, the project will indirectly support further investment in greenfield and brownfield geothermal power generation and other renewable energy projects. In so doing, it will help achieve the government's objective to diversify the country's energy mix, increase energy security, and reduce greenhouse gas emissions.

15. **Outcome.** The outcome is demonstrated viability of green project bonds for renewable energy in the Philippines. The project supports the debt recapitalization of an existing project through bonds, thereby deepening capital market development in the country. As this represents a new asset class, local institutional investors will require confirmation that such green project bonds can be implemented successfully.

16. **Outputs.** The outputs are (i) successful introduction of Tiwi–MakBan green project bonds for geothermal energy, and (ii) achievement of green bond status and submission of application for climate bond certification.

C. Alignment with ADB Strategy and Operations

17. **Consistency with Strategy 2020 and the Midterm Review of Strategy 2020.** The project is consistent with Strategy 2020 and the Midterm Review of Strategy 2020, which list infrastructure, the environment, and finance sector development as three of ADB's five core areas.⁷ For finance sector development, the project advances goals of developing new products and deepening capital markets to channel national savings productively. In terms of infrastructure, the project supports clean energy and private sector engagement. For environment, it reinforces ADB's support to the Philippines in pursuing a low-carbon path for economic growth.

18. **Consistency with the country strategy.** Among the main pillars of ADB's country partnership strategy for the Philippines are private sector development, reduced environmental degradation, and vulnerability to climate change. The project supports each pillar. It is also in line with ADB's programs to increase investment in infrastructure through PPPs, and to increase the availability of long-term finance to fund infrastructure investment.⁸

19. **Consistency with the Energy Policy.** The project is consistent with ADB's Energy Policy, which emphasizes support for renewable energy in DMCs.⁹

20. **Consistency with the Financial Sector Operational Plan.** The plan recognizes that the Asia and Pacific region's capital markets require the participation of institutional investors to mobilize long-term savings for infrastructure development. The plan also supports the promotion of debt capital markets, including local currency bonds, and ADB's use of innovative financing mechanisms such as credit enhancements to enable the financing of infrastructure.

⁷ ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank 2008–2020*. Manila; and ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

⁸ ADB. 2014. *Technical Assistance to the Republic of the Philippines for Strengthening Treasury Operations and Capital Market Reform*. Manila; ADB. 2010. *Technical Assistance to the Republic of the Philippines for Capacity Development to Support Regulation and Oversight at the Insurance Commission*. Manila; and ADB. 2010. *Technical Assistance to the Republic of the Philippines for Promoting an Interlinked ASEAN Capital Market*. Manila.

⁹ ADB. 2009. *Energy Policy*. Manila.

D. Project Cost and Financing Plan

21. The project consists of assets of P30.5 billion, including power plant and related equipment purchased in 2009 from the government at public auction, as well as subsequent investments in rehabilitation works.

22. Debt of up to P12.5 billion will be raised in two tranches:

- (i) **Project bonds.** Up to P10.7 billion in local-currency nonrated project bonds will be sold to institutional investors. The bonds will have a tenor of up to 10 years, and will be partially guaranteed by ADB (para. 24).
- (ii) **Loan.** Up to P1.8 billion (or its dollar equivalent if pesos are unavailable) of project loan from ADB, with a tenor of up to 5 years, which will complement the bond *pari passu*.

23. The debt will be utilized to normalize the capital structure and support ongoing operation and maintenance.

III. THE PROPOSED ADB ASSISTANCE

A. The Assistance

24. The assistance will comprise:

- (i) **Partial credit guarantee.** ADB will cover up to 75% of scheduled principal payments of the up to P10.7 billion 10-year nonrated senior secured project bonds (equivalent with up to P8.025 billion at issuance) plus interest thereon. The bond will be labeled a green bond and is anticipated to be certified under the climate bond standard.¹⁰
- (ii) **Loan.** ADB will provide a limited recourse direct senior secured loan of up to P1.8 billion equivalent (or its equivalent in dollars if pesos are unavailable), at a fixed rate, with a tenor of up to 5 years. The loan will be *pari passu* with the bonds and secured by the assets of the project to the extent practicable and available under Philippine law. ADB will procure pesos through cross-currency and interest rate swaps.

B. Value Added by ADB Assistance

25. The project is considered justified because it will:

- (i) Apply ADB's skills in financial structuring toward establishing a new asset class in the Philippines—peso-denominated green project bonds—and supporting the development of the Philippine capital market. The project will thereby demonstrate an innovative structure to access alternative sources of capital from institutional investors.
- (ii) Create a green bond, and thereby promote the concept of environmentally themed bonds to DMCs and support knowledge transfer in climate finance.

¹⁰ ADB will engage a consultant to independently audit APRI's compliance with the climate bond standard and assist in the company's application to the Climate Bond Initiative. Consultant and certification fees will be funded by ADB's Regional and Sustainable Development Department under ADB. 2013. *Technical Assistance for Enhancing Readiness of ADB Developing Member Countries For Scaled-Up Climate Finance*. Manila (TA 8608-REG).

- (iii) Contribute ADB's first support to nonsovereign geothermal power in the Philippines, a sector with importance to the country's future energy development.

IV. POLICY COMPLIANCE

A. Safeguards and Social Dimensions

35. In compliance with ADB's Safeguard Policy Statement (2009), the project is classified as category B for environment, and category C for involuntary resettlement and indigenous peoples. The potential environmental and social impacts of the project have been identified and effective measures to avoid, minimize, mitigate, and compensate for the adverse impacts are incorporated in the safeguard reports and plans. The institutional capacity and commitment of APRI to manage the project's social and environmental impacts are deemed adequate. While climate change risk has been rated medium, as an existing facility it is not possible to make project design changes. The facilities have in place effective operational procedures to respond to significant weather events.

36. **Environment.** Since Tiwi and MakBan are existing geothermal power generation facilities, an appropriate external expert prepared an environmental compliance audit report with a corrective action plan in accordance with the Safeguard Policy Statement. APRI, in coordination with PGPC, is fully accountable for and in compliance with environmental compliance certificate (ECC) conditions on the existing generating and steam-field facilities transferred under its name in September 2009. Relevant national and international emission standards are being met. APRI has adopted internationally recognized environmental and safety management standards and is in the process of seeking management system certification.¹¹ An ongoing process of community engagement, including ECC-compliant barangay emergency response training, ensures that pertinent information on Tiwi–MakBan activities is fully disclosed and a functioning stakeholder grievance mechanism is in place. The plants use a closed-loop system in which wastewater and condensates are disposed through reinjection into injection wells fitted with leak-proof casings. Surface and drinking water monitoring results demonstrate compliance with national standards for drinking water.¹² As the PGPC steam field, an associated facility, is covered under the ECCs, it also complies with relevant national environmental legislation.

37. The environmental compliance audit report identified some information gaps, so a corrective action plan was developed to enhance the Tiwi–MakBan Environmental Management and Monitoring Plan, including (i) clear delineation of the roles and responsibilities as per GRSC provisions¹³ and (ii) conditions stipulated in the ECC agreed upon by APRI and PGPC. APRI and PGPC are developing joint operational guidelines to clarify roles and responsibilities for meeting the monitoring and reporting requirements of government agencies.

¹¹ APRI has initiated International Organization for Standardization (ISO) accreditation for ISO 9001 (quality management system), ISO 14001 (environmental management system), and Occupational Health and Safety Advisory Services 18001.

¹² As is common in geothermal areas, elevated levels of boron have been measured in groundwater. PGPC has signaled its intent to request that the geothermal area in MakBan be designated as a non-attainment area for boron groundwater, as provided in the Philippine Clean Water Act.

¹³ GRSC (2003), Section 6.8, "All Government approvals (if any) required under applicable law to be maintained by the owner (PSALM, now APRI) in connection with, and which are material to, the generating facilities and by the contractor (Philippine Geothermal, Inc., now PGPC) in connection with, and which are material to, the geothermal facilities shall be obtained and at all times maintained, or caused to be obtained and maintained, by the relevant party, in full force and effect and, where applicable, renewed and caused to be renewed by the relevant party at the relevant time."

38. **Social safeguards.** APRI will neither acquire additional land nor construct new facilities. The project will finance the procurement of machinery and equipment needed in APRI's current operations. The Tiwi–MakBan plant facilities are located on 1,011 plots leased by the Power Sector Assets and Liabilities Management Corporation to APRI. The leased premises have an aggregate land area of 368 hectares (Tiwi) and 176 hectares (MakBan). APRI's rehabilitation activities are largely completed, and only a few facilities still need improving. A social compliance audit report covering the leased premises has been prepared. APRI's current operations are unlikely to impact the informal dwellers within the leased premises. No indigenous peoples reside in the project areas, and APRI's operations do not interfere with or impact indigenous peoples' property or livelihoods.

39. **Other social dimensions.** APRI will comply with national labor laws and, pursuant to ADB's Social Protection Strategy (2001), will take measures to comply with internationally recognized core labor standards.¹⁴ The borrower will report regularly to ADB on (i) its (and its contractors') compliance with such laws, and (ii) the measures taken. Information disclosure and consultations with affected people will be conducted in accordance with ADB requirements. While the project design has no direct impact on women and is categorized as having no gender elements, APRI implements corporate social responsibility programs that benefit both men and women in the community. APRI has 260 employees, of which 23% are women.

B. Anticorruption Policy

40. APRI was advised of ADB's policy of implementing best international practice relating to combating corruption, money laundering, and the financing of terrorism. ADB will ensure that the investment documentation includes appropriate provisions prohibiting corruption, money laundering, and the financing of terrorism, and remedies for ADB in the event of noncompliance.

C. Investment Limitations

41. The proposed guarantee and loan are within the medium-term, country, industry, group, and single-project exposure limits for nonsovereign investments.

D. Assurances

42. Consistent with the Agreement Establishing the Asian Development Bank (the Charter),¹⁵ ADB will proceed with the proposed assistance upon establishing that the Government of the Philippines has no objection to the proposed assistance to APRI. ADB will enter into suitable finance documentation, in form and substance satisfactory to ADB, following approval of the proposed assistance by the ADB Board of Directors.

V. RECOMMENDATION

43. I am satisfied that the proposed partial credit guarantee and loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve

- (i) the partial credit guarantee of up to P8,025,000,000 of principal and interest thereon to bondholders; and

¹⁴ ADB. 2003. *Social Protection Strategy*. Manila (adopted in 2001).

¹⁵ ADB. 1966. *Agreement Establishing the Asian Development Bank*. Manila.

(ii) the direct loan of up to P1,800,000,000 (or its equivalent in US dollars) from ADB's ordinary capital resources to AP Renewables, Inc. for the Tiwi and MakBan Geothermal Power Green Bonds Project in the Philippines, with such terms and conditions as are substantially in accordance with those set forth in this report, and as may be reported to the Board.

Takehiko Nakao
President

11 June 2015