



CGN SECOND GREEN BOND ISSUANCE

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CGN GREEN BOND FRAMEWORK

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1. Introduction

Greenhouse gas emissions, which are closely linked to energy production and consumption, have become one of the biggest environmental challenges for the world and China. As an international agreement to address the global climate change, the Paris Climate Agreement came into effect since 4 November 2016. As a responsible developing country, China has announced a strong commitment towards emission reduction. According to the China Climate Bulletin (2015):

- by 2030, CO₂ emissions per unit of GDP will be reduced by 60-65% from the 2015 level;
- by 2030, non-fossil energy will account for 20% of total primary energy consumption, in comparison to the actual level of 11.9% in 2015.

In 2017, the National Energy Administrat

to continue to step up the development of non-fossil fuels; secondly, to expand the consumer market of natural gas; and thirdly, to achieve clean and efficient use of fossil fuels, in particular coal. It is expected

Five- Later that

Today, renewable energy represents a substantial portion of the end of 2017, CGN Group had installed wind power capacity of 11.89 GW, installed solar power capacity of 2.32 GW and installed hydro power capacity of 0.195 GW in operation. The aggregated installed capacity in operation at the end of 2017.

In 2017, on-grid clean power generation (including nuclear power and renewable energy) reached 211.9 TWh, which is equivalent to conservation of coal consumption of approx. 66 million tons or 160 million tons of avoided carbon dioxide emission. To further develop renewable energy, CGN aims to increase its installed power capacity in renewable energy to 35 GW by the end of 2020.

2. Green Bond Framework

The CGN Green Bond Framework **The Framework** has been drafted in alignment with the Green Bond Principles 2018¹. As such, it will follow the four components as described by the GBP: **Use of Proceeds, Process for Project Selection, Management of Proceeds and Reporting.**

2.1 Use of Proceeds

Proceeds raised through the Green Bond issuances will be exclusively used to finance or refinance in whole or in part, the Eligible Green Projects (defined below) owned by subsidiaries or affiliates of the **Eligible Green Projects** new or existing projects in the conception, construction and installation of renewable energy production units and associated expenses for the acquisition and the construction. It covers energy produced from renewable energy sources and only includes wind and solar as sources of energy. The Eligible Green Projects shall comply with specific Environmental, Social and Governance criteria **ESG Criteria**

- Review of in-depth due diligence provided by technical advisors analyzing the environmental aspects of the project and its compliance with local regulation for environmental and labor matters;
- Organization and Management departments reviewing the due diligence reports and providing recommendations on the environmental and social aspects. These departments are in charge of the compliance and the monitoring of the ESG Criteria during the construction and operating phases of the project.

The main ESG Criteria are as follows:

- Monitor the environmental impact of the projects and improve energy efficiency of the facilities and resources utilization rate to achieve energy saving in response to the climate change;
- Promote the compliance with environmental protection regulations, and encourage suppliers to observe best practices in operating in an environmentally responsible manner to reduce carbon emission and waste production and enhance recycling effort to mitigate the effects on environment;
- Management of the environmental impact of the project, and carry forward the sophisticated conservation policy and protect surrounding biology diversity of the source of energy;
- Protect human and labor rights, and establish ethical, transparent and sustainable human resources practices and process;
- Promote health and safety of all employees and contractors;
- including suppliers, constructors, and contractors through various channels such as transparent disclosure, consulting, visit and communities activities, responding to the expectation of stakeholders effectively, all of which help form the mutual trust and reciprocal relationship;
- Committed to proactive dialogue and active contribution to local communities and their economic development.

2.2 Process for Project Evaluation and Selection

CGN Group will adopt the following evaluation procedures to identify and select Eligible Green Project:

Strictly following the ESG Criteria, various CGN renewable energy subsidiaries **Respective Subsidiaries** will make the preliminary screening of Eligible Green Projects. Other technical parameters such as project scale, financial return, construction progress and risk assessment etc. are also considered in parallel in formulating the investment plan which is submitted to the Respective Subsidiary CEO Working Meeting for pre-approval, upon which the Eligible Green Projects will be reported to the Respective Subsidiary Board Meeting for formal approval. Eligible Green Projects are reviewed from multi perspectives including compliance to the ESG Criteria, environmental impact, strategic planning, stress testing, financial budget and financing plan, etc. Eligible Green Projects which exceed a certain budget size will

Apart from allocating or raising funds according to annual budget, projects that will be financed by green bond proceeds will be independently overseen by the Finance Department of Head Office to comply with

2.3 Management of Proceeds

CGN International as the Green Bond issuer will open a dedicated account, whereby the proceeds of any Green Bond issued by CGN International will be deposited after issuance. For each Green Bond issuance, the funds will be specially earmarked within internal accounting systems to ensure that such funds will finance only disbursements related to Eligible Green Projects as defined under the Use of Proceeds. The Finance Department of CGNPC Head Office will implement the account supervision and fund flow tracking through the centralized electronic banking system, and Respective Subsidiaries will report to their Boards of Directors and allocation of proceeds.

Any balance of issuance proceeds not allocated to Eligible Green Projects will be held in accordance with

Group will provide an audit report by an independent third-party on an annual basis until the full allocation of proceeds into Eligible Green Projects.

CGN intends to allocate the proceeds of a given Green Bond issuance within 24 months from the issue date of each Green Bond issuance.

2.4 Reporting

CGN Group will prepare a Green Bond Report, on an annual basis, that will provide an overview of the projects financed through the proceeds raised from a Green Bond issuance. The following information will be provided on the Eligible Green Projects financed:

- Project Category
- Project Size (MW)
- Project Location
- Project Revenue Mechanism
- Annual Operating Hours
-
- Project Costs
- Currency
- Starting date of operation/age of the project
- Amount of the Green Bond allocated to this Eligible Project

The allocation of proceeds will be audited on an annual basis by an independent third-party auditor until the full allocation of proceeds into Eligible Green Projects.

Environmental Impact Reporting

CGN Group will promote the use of impact reporting and the Green Bond report will provide with the information per Eligible Green Project;

- Installed capacity in MW;
- Annual GHG emissions avoided in tons of CO2 equivalent; and
- Annual renewable energy production in MWh

CGN International will also provide the consolidated figures for all the Eligible Green Projects and the ratio per the amount financed through the Green Bond.

All reporting will be publicly available.

3. External Assurance

CGN International has asked Deloitte to provide an independent assessment on the alignment of the Framework to the Green Framework is in compliance with the Green Bond Principles, 2018.

These documents will be publicly available on CGN Group

Independent Limited Assurance Statement to the Directors of CGNPC International Limited

We have audited the CGNPC International Limited's financial statements for the year ended 31 August 2018, as set out in the financial statements on pages 10 to 15 of the financial statements.

- The use of the proceeds, as described in the Company's *Green Bond Management Statement*, is in accordance with the "Use of Proceeds" requirements of *Green Bond Principles, 2018*;
- The Policies and Internal Controls (including project evaluation and selection, management of proceeds and reporting), are in accordance with the requirements of *Green Bond Principles, 2018*.

Responsibilities of Directors

The directors of the Company are responsible for:

- Preparation, presentation and implementation of the Use of Proceeds of the Green Bond Management Statement in accordance with the "Use of Proceeds" requirements of *Green Bond Principles, 2018*;

- Establishing appropriate risk management and internal controls relevant to the object of preparation and presentation of the *Operational Management Statement* in line with the requirements of *Green Bond Principles, 2018*;
- Establishing appropriate risk management and internal controls relevant to the object of preparation and presentation of the *Operational Management Statement* in line with the requirements of *Green Bond Principles, 2018*;

Our Responsibilities

Our responsibility is to express our opinion based on the audit of the financial statements and the *Green Bond Management Statement* to conclude whether as of 31 August 2018:

Green Bond Management Statement in accordance with the requirements of *Green Bond Principles, 2018*.

Our responsibility is to express our opinion based on the audit of the financial statements and the *Green Bond Management Statement* to conclude whether as of 31 August 2018:

- The use of the proceeds, described in Company's *Green Bond Management Statement*, is in accordance with the "Use of Proceeds" requirements of *Green Bond Principles, 2018*;

- The Policies and Internal Controls (including project evaluation and selection, management of proceeds and reporting), are in accordance with the requirements of *Green Bond Principles, 2018*.

Independence and Quality Control

We have complied with the independence and other ethical requirements of the *Code of Ethics for accountants* issued by the International Ethics Standards Board for Accountants. Our firm also complies with the *International Standard on Quality Control 1* and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with applicable professional standards and quality control, and use of the firm's quality control system.

Our Independence

We have complied with the independence and other ethical requirements of the *Code of Ethics for accountants* issued by the International Ethics Standards Board for Accountants. Our firm also complies with the *International Standard on Quality Control 1* and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with applicable professional standards and quality control, and use of the firm's quality control system.

Basis of Our Work

We conducted our assurance engagement in accordance with the *International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements Other Than Audits or Reviews of Historic Financial Information* (the "ISAE3000"), which requires the assurance team to have relevant knowledge, skills and expertise to understand and review the report information. We planned and performed our work so as to obtain all the information and explanations which we considered necessary in order to provide an independent assurance conclusion.

Our procedures primarily included: interviewing with Company personnel responsible for the preparation and presentation of the *Green Bond Management Statement*; reviewing relevant supporting documents; analyzing the information obtained; and other procedures relevant to the collection of appropriate review evidence. Specifically the procedures include:

- Assessing the appropriateness of the design criteria established by Company for the use of proceeds;
- Conducting interviews with management and key staff responsible for the Green Bond process to obtain an understanding of the policies, processes and internal controls in place for the project evaluation and selection, management of proceeds, and reporting;
- Checking documents in relation to the project evaluation and selection, management of proceeds, and reporting.

Work

in the limited assurance and the scope of this engagement, the nature of our work was limited to the assurance. Our assurance work and report will not express an opinion on the effectiveness of Company's management system and procedure.

Our assurance was limited to Company's 2018 Green Bond issuance, and did not include statutory financial statements. Our assurance was limited to policies and procedure in place as of 31 August 2018, before the issuance of Company's 2018 Green Bond.

Limitations of Our Work

Processes conducted, and the nature of our work was limited to the assurance. Our assurance work and report will not express an opinion on the effectiveness of Company's management system and procedure.

Our assurance was limited to Company's 2018 Green Bond issuance, and did not include statutory financial statements. Our assurance was limited to policies and procedure in place as of 31 August 2018, before the issuance of Company's 2018 Green Bond.

Conclusions

Our work performed and described in the *Independent Assurance Statement* is to our attention that would cause us to believe that the *Green Bond Management Statement* is not in accordance with the requirements of *Green Bond Principles, 2018*.

- Subject to the limitation of our work, and the scope of this engagement, the nature of our work was limited to the assurance. Our assurance work and report will not express an opinion on the effectiveness of Company's management system and procedure.
- Subject to the limitation of our work, and the scope of this engagement, the nature of our work was limited to the assurance. Our assurance work and report will not express an opinion on the effectiveness of Company's management system and procedure.

Restriction on Use

Our work performed and described in the *Independent Assurance Statement* is to our attention that would cause us to believe that the *Green Bond Management Statement* is not in accordance with the requirements of *Green Bond Principles, 2018*.

Our work has been undertaken to enable us to express an opinion on the effectiveness of the *Green Bond Management Statement* in accordance with the requirements of *Green Bond Principles, 2018*. We do not express an opinion on the effectiveness of the *Green Bond Management Statement* for any other purpose, or for any other use.

Deloitte LLP

Deloitte Touche Tohmatsu Certified Public Accountants

Deloitte LLP

21 August 2018

Appendix A

CGNPC International Limited

Green Bond Management Statement

CGNPC International Limited (the Company) is responsible for the preparation and fair presentation of this Green Bond Management Statement (the Statement) as of 21 August 2018, and China General Nuclear Power Corporation (the CGN Group) is the Company's parent company and the guarantor.

Purpose

This *Statement* is developed to demonstrate how the Company funds existing and new projects with environmental benefits by issuing Green Bonds in compliance with the *Green Bond Principles, 2018*.

Assertions from management

For the Company's Green Bonds to be issued in 2018, the Company Management asserts that it will adopt (1) Use of Proceeds (2) Project Evaluation and Selection (3) Management of Proceeds (4) Reporting as set out in this *Statement*.

1. Use of Proceeds

With reference to the *Green Bond Principles 2018*, proceeds raised through the Green Bond issuances will be exclusively used to Eligible Green Projects, and will not be used to finance nuclear-related projects. Eligible Green Projects refer to new or existing projects in the conception, construction and installation of renewable energy production units and associated expenses for the acquisition and the construction. It covers energy produced from renewable energy sources and only includes wind and solar as sources of energy.

and are highly scrutinized through the following process:

- Review of in-depth due diligence provided by technical advisors analyzing the environmental aspects of the project and its compliance with local regulation for environmental and labor matters.
- Dedicated teams within CGN Group including departments reviewing the due diligence reports and providing recommendations on the environmental and social aspects. These departments are in charge of the compliance and monitoring of the ESG Criteria during the construction and operating phases of the project.

The main ESG Criteria, which are highly scrutinized include among other factors are the following:

- Monitor the environmental impact of the projects and improve energy efficiency of the facilities and resources utilization rate to achieve energy saving in response to the climate change.
- Promote the compliance with environmental protection regulations, and encourage suppliers to observe best practices in operating in an environmentally responsible manner to reduce carbon emission and waste production and enhance recycling effort to mitigate the effects on environment.
- Manage of the environmental impact of the project, and carry forward the sophisticated conservation policy and protect surrounding biology diversity of the source of energy.
- Protect human and labor rights, and establish ethical, transparent and sustainable human resources practices and processes.
- Promote health and safety of all employees and contractors.
- keholders including
suppliers, constructors, and contractors through various channels such as transparent disclosure, consulting, visit and communities activities, responding to the expectation of stakeholders effectively, all of which help form the mutual trust and reciprocal relationship.
- Commit to proactive dialogue and actively contribute to local communities and their economic development.

The Eligible Green Projects that CGN Group that have been identified and selected so far are mainly located in Northern Ireland, France, Sweden. From the project portfolio that CGN Group has been building, the geographical location for those pipeline shall primarily be located in the Continental Europe.

2. Project Evaluation and Selection

CGN Group will adopt the following evaluation procedures to identify and select Eligible Green Projects:

Strictly following the ESG Criteria, various CGN Group renewable energy subsidiaries ("Respective Subsidiaries") will make the preliminary screening of Eligible Green Projects. Other technical parameters such as project scale, financial return, construction progress and risk assessment etc. are also considered in parallel in formulating the investment plan which is submitted to the Respective Subsidiary s CEO Working Meeting for pre-approval, upon which the Eligible Green Projects will be reported to the Respective Subsidiary Meeting for formal approval. Eligible Green Projects are reviewed from multi perspectives including compliance to the ESG Criteria, environmental impact, strategic planning, stress testing, financial budget and financing plan, etc.

Eligible Green Projects which exceed a certain budget size will need to obtain final approval from i) CGN

3. Management of Proceeds

The Company as Green Bond issuer will open a dedicated account, whereby the proceeds of any Green Bond issued by the Company will be deposited after issuance. For each Green Bond issuance, the funds will be specially earmarked within internal accounting systems to ensure that such funds will finance only

disbursements related to Eligible Green Projects as defined under the Use of Proceeds. The Finance Department of CGN Group Head Office will implement the account supervision and fund flow tracking through the centralized electronic banking system, and Respective Subsidiaries will report to their Boards of Directors and CGN Group Finance Department on a regular basis about the progress of the allocation of proceeds.

Any balance of issuance proceeds not allocated to Eligible Green Projects will be held in accordance with CGN Group equivalent and/or money market instruments. CGN Group will provide an audit report by an independent third-party on an annual basis until the full allocation of proceeds into Eligible Green Projects.

The Company will retain necessary records of the amount of the net proceeds that has been allocated to Eligible Green Projects and the amount of the net proceeds, if any, which remains in the specific account for future allocation to Eligible Green Projects.

The use of proceeds and the allocation of the proceeds will be strictly in accordance with this Statement, as well as the Company's fund management system.

CGN Group intends to allocate the proceeds of a given Green Bond issuance within 24 months from the issue date of each Green Bond issuance.

4. Reporting

So long as the Green Bonds are outstanding and until such time as all of the net proceeds have been allocated to Eligible Green Projects, CGN Group will prepare a Green Bond report, on an annual basis, that will provide an overview of the projects financed through the proceeds raised from Green Bond issuance. The following information about the Eligible Green Projects financed will be provided:

- A brief introduction of the Eligible Green Projects
- Amount of the Green Bonds allocated to the Eligible Green Projects
- Amount and use of the unallocated proceeds.
- Environmental Impact Reporting

The allocation of proceeds will be audited on an annual basis by an independent third-party auditor until the full allocation of proceeds into Eligible Green Projects.

CGNPC International Limited

21 August 2018