



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 Administration of China issued the “Thirteenth Five-Year Plan on Energy” and “Thirteenth Five-Year Plan on Renewable Resources”, which proposed three main objectives: firstly, 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 that clean energy will become the main driving force of increasing energy supply during the “Thirteenth Five-Year Plan”. Later that year, the 19th National Congress of the Communist Party of China proposed a strategic plan to accelerate the reform of the ecological civilization system, promote green development, and build a “beautiful China”.

China General Nuclear Power Corporation (“**CGN Group**”/ “**CGN**”) is one of the backbone state-owned enterprises of China and one of the leading energy groups in China. It is now the largest nuclear power group and the fifth largest renewable energy group in China. In line with the commitments and objectives set by the Chinese Government, CGN Group will continue to pursue the mission to become “A World Class Energy Provider”.

Originated from nuclear power generation business, CGN Group expanded into non-nuclear clean and renewable energy (including mainly wind, hydro, solar power as well as energy conservation technologies) since 2005. In 2010, CGN acquired Meiya Power (subsequently renamed to CGN New Energy Holdings Co Ltd) which is now a HK-listed company and a majority-owned subsidiary of CGN Group to develop non-nuclear clean and renewable energy. To promote the renewable energy development, CGN has established four investment vehicles domestically and globally with different geographical focus for the development of the renewable energy projects. Specifically, CGN Wind Energy, CGN Solar Energy, and CGN New Energy Holdings Co Ltd (1811.HK) cover the domestic energy projects in China, while CGN Energy International Holdings Co Ltd (“**CGNE Intl**”) cover projects outside of China.

In addition to the investment strategy in the renewable energy sector, CGN has also established an efficient process of negative list (“**Negative List**”), which details a number of areas that are restricted from investments or with inadequate pre-assessment, such as coal-fired power generation and oil-fired power generation.

CGN Europe Energy SAS (“**CGNEE**”), a wholly-owned subsidiary of CGNE Intl, is positioned as the dedicated European platform of CGN Group to develop clean and renewable energy in Europe. Europe has a stable social and market environment with sound legal system and a stable demand for electricity. High-quality green projects are more prevalent in Europe. By investing in selected green projects in Europe, CGN can obtain a stable financial return. Investing clean and renewable energy in Europe is in line with CGN’s vision to be a world-class clean energy enterprise, and is a part of CGN’s internationalization strategy. On the other hand, CGN identifies Africa as a market with substantial potential for renewable energy due to (i) shortage of electrical power and (ii) their location neighboring the Earth’s equator region with abundant solar energy resources.

In December 2017, CGNPC successfully issued its Inaugural EUR 500mn 7-year green bond, of which the net proceeds have been fully allocated to finance or refinance six eligible projects of CGNEE, located in Ireland, France, Belgium and Senegal. The estimated annual green bond financed environmental benefit is 364,557 tons of avoided carbon dioxide emission.

Today, renewable energy represents a substantial portion of the CGN Group's operations. As 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 of wind, solar and hydro power represented 32% of CGN Group's total installed power generation capacity in operation at the end of 2017.

In 2017, CGN's total 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 2018 (“GBP”) ¹. 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 CGN Group. “**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. The Eligible Green Projects shall comply with specific Environmental, Social and Governance criteria (“**ESG Criteria**”) 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 including the “Health, Safety and Environment” and the 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;
- Build and improve consultation and communication mechanism for the territory's stakeholders 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:

¹ More information: <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>

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’s CEO Working Meeting for pre-approval, upon which the Eligible Green Projects will be reported to the Respective Subsidiary’s 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 need to obtain final approval from i) CGN Group’s General Manager Working Meeting and ii) CGN Group’s Board of Directors.

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 the “Use of Proceeds” provision.

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 CGN’s Finance Department on a regular basis on 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’s Treasury strategy and invested in cash, cash 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.

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

Allocation 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
- CGN’s share percentage
- 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 Bond Principles (the “Independent Limited Assurance”) which concludes that the Framework is in compliance with the Green Bond Principles, 2018.

These documents will be publicly available on CGN Group’s website.



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Independent Limited Assurance Statement to the Directors of CGNPC International Limited

We were engaged by CGN Europe Energy to provide limited assurance over CGNPC International Limited (the "Company")'s *Green Bond Management Statement (Appendix A)* to conclude whether as of 21 August 2018:

- 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*;
- Preparation, presentation and implementation of the Policies and Internal Controls (including project evaluation and selection, management of proceeds, and reporting) described in the *Green Bond Management Statement*, and the suitable design of controls, to meet the requirements of *Green Bond Principles, 2018*;
- Establishing appropriate risk management and internal controls relevant to the collection, preparation and presentation of the *Green Bond Management Statement* is free from material misstatement, whether due to fraud or error.

Our Responsibilities

Our responsibility is to express our limited assurance conclusion in relation to the Company's *Green Bond Management Statement* to conclude whether as of 21 August 2018:

- The use of the proceeds, described in Company's *Green Bond Management Statement* 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*.

Our Independence and Quality Control

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

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 sufficient evidence to form conclusions.

Our procedures performed include interviewing with Company's personnel responsible for collection, 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 eligible 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 documentation which supports the policies, processes and internal controls in place for the project evaluation and selection, management of proceeds, and reporting;
- Performing limited testing to source documentation to support the evaluation and selection of eligible projects.

Limitations of Our Work

Processes conducted in the limited assurance and the scope of this engagement are less than that of reasonable assurance. Our assurance work and report will not express an opinion on the effectiveness and performance of Company's management system and procedure.

Our assurance was limited to Company's 2018 Green Bond pre-issuance, and did not include statutory financial statements. Our assurance was limited to policies and procedure in place as of 21 August 2018, before the issuance of Company's 2018 Green Bond.

Conclusions

- Subject to the limitation of our work, and the work performed and described in the *Independent Limited Assurance Statement*, nothing has come to our attention that would cause us to believe that the Use of Proceeds, described in the *Green Bond Management Statement* is not in accordance with the "Use of Proceeds" requirements of *Green Bond Principles, 2018*;
- Subject to the limitation of our work, and the work performed and described in the *Independent Limited Assurance Statement*, nothing has come to our attention that would cause us to believe that the Policies and Internal Controls (including project evaluation and selection, management of proceeds, and reporting), are not in accordance with the requirements of *Green Bond Principles, 2018*.

Restriction on Use

Our work has been undertaken to enable us to express a limited assurance conclusion in accordance with the terms of our engagement agreed with the directors of CGN Europe Energy, and for no other purpose. We do not accept or assume liability to any party other than CGN Europe Energy and the Company for our work, for this report, or for the conclusion we have reached.

Deloitte Touche Tohmatsu Certified Public Accountants LLP

Deloitte Touche Tohmatsu Certified Public Accountants 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.

The Eligible Green Projects shall comply with specific Environmental, Social and Governance (“ESG Criteria”) 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 the “Health, Safety and Environment” and the “Organization and Management” (“O&M”) 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.
- Build and improve consultation and communication mechanism for the territory's stakeholders 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's 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 need to obtain final approval from i) CGN Group's General Manager Working Meeting and ii) CGN Group's Board of Directors.

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's 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's Treasury strategy and invested in cash, cash 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