

**Project Completion Report Validation** 

The People's Republic of China

**Lingang Distributed Solar Power Project** 

**Owner:** Independent Evaluation Office

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## **Table of contents**

Wha	t is a project completion report validation (PCRV)?	ii
Ackn	nowledgements	ii
Abbr	reviations	ii
l.	Basic project data	1
II.	Project description	2
III.	Assessment of project performance	3
IV.	Performance of partners	8
V.	Assessment of PCR quality	10
Anne	ex I	12
Defir	nition of evaluation criteria for PCRVs of public sector operations	12
Anne	ex II	13
Ratir	ng scale	13
Table	e of ratings	14

## What is a project completion report validation (PCRV)?

At the closure of every project, the New Development Bank (NDB) prepares a project completion report (PCR) — a type of self-assessment designed to measure the project's implementation performance and results.

The Bank's Independent Evaluation Office (IEO) then conducts an assessment of the overall quality of the PCR. This is called a project completion report validation – or PCRV. Information on the methodology and process of running a PCRV can be found here.

#### **Key objectives of the PCRV:**

- (a) Promote accountability and learning;
- (b) Contribute to strengthening the quality and credibility of PCRs (as a key self-evaluation instrument) prepared by the NDB;
- (c) Provide an independent assessment of the entirety of projects financed by the NDB exiting the project portfolio in any given year; and
- (d) Generate data and lessons that may provide the foundation for independent evaluations conducted by IEO.

## **Acknowledgements**

The PCRV was developed under the overall oversight of Mr. Ashwani K. Muthoo, Director General of the IEO. Ms. Nidhi Chaudhary, IEO Evaluation Specialist, coordinated and drafted the report but special thanks are extended to Mr. Anil Sood, IEO Senior Development and Evaluation Specialist, and colleagues from the NDB China Desk for their critical inputs. Additional gratitude goes to Ms. Jacqueline Rabelo Souza, IEO Evaluation Communication and Outreach Expert, and Mr. John Laird, IOE Communication Specialist, for their support in preparing and ensuring the good quality of the document.

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Ab	bre	viat	ions

DPV	distributed photovoltaic	NDB	New Development Bank
EIRR	economic internal rate of return	PE	project entity
ENPV	economic net present value	PCR	project completion report
FIRR	financial internal rate of return	PIA	project implementation agency
FYP	five-year plan	PV	Photovoltaic
MW	megawatt	SLHND	Shanghai Lingang Hongbo New
			Energy Development Co., Ltd.
		SLIA	Shanghai Lingang Industrial Area

# I. Basic project data

	1		
Country	China		
Loan No.	16CN01		
Project name	Lingang Distributed Solar Power Project		
Borrower	The People's Rep	oublic of China	
Executing agency	The Peoples' Go Shanghai Munici		
Project implementation agency		Shanghai Lingang Hongbo New Energy Development Co., Ltd. (SLHND)	
Loan approval date	April 13, 2016		
Loan signing date	December 21, 20	016	
Loan effectiveness date	June 6, 2017		
	At approval	Currently	
Loan currency	Renminbi (RMB)	RMB	
Loan amount	525 million	222.61 million	
Loan closing date	December 21, 2019	December 21, 2020	
Project implementation period	3 years	4 years	
	At appraisal At completion		
NDB project team			
Team leader	Garvit Sah		
Legal counsel	Ravindranath Menon, Miya Liu		
Operations	He Tian	Su Han, Tony Nkuna, Diyun Wang	
Environmental and social sustainability (E&S) impact management		Naval Chaudhary	
Project procurement		Nitin Gupta	
Financial management		Craig Lai King, Min Zang	

	Estimate at approval	Actual
	Amount	Amount
Project cost (RMB million)		
Plant and equipment	553.00	151.33
Design, construction & installation, supervision & admin charges	187.00	173.48
Contingency	10.00	-
Financial charges during construction	-	3.71
Total Project Cost	750.00	328.51
Project financing plan (RMB million)		
NDB	525.00	222.61
SLHND	225.00	105.90
Total project financing	750.00	328.52
Project implementation schedule		
Installed capacity (MW) in 1st year	22.30	20.37
Installed capacity (MW) in 2nd year	35.00	7.55
Installed capacity (MW) in 3rd year	42.70	12.89
Installed capacity (MW) in 4th year	-	24.42
Total installed capacity (MW)	100.00	65.23

## II. Project description

## A. Overview of the project

- 1. The Lingang Distributed Solar Power Project was aligned with China's national development priorities of shifting towards a "high-quality" growth model, emphasizing the use of renewable energy for electricity generation and building a low-carbon economy. The project was designed to install 100 megawatts (MW) of distributed solar photovoltaic (PV) power plants on rooftops within the Shanghai Lingang Industrial Area (SLIA) an industrial development zone in the Shanghai municipal area.
- 2. On April 26, 2016, the NDB Board approved a loan of RMB 525 million for the project. The loan agreement with the Government of the People's Republic of China was signed on December 21, 2016, and became effective on June 6, 2017. In response to a significant tariff regime change in May 2018, amendment number 2 to the loan agreement was signed on May 13, 2020. This amendment reduced the project scope from 100 MW to 65 MW and extended the closing date from December 2019 to December 2020.
- 3. Shanghai Lingang Hongbo New Energy Development Co. Ltd. (SLHND) executed the project for the SLIA. As of December 21, 2020, SLHND successfully completed the project construction as per the revised plan, achieving an installed capacity of 65.23 MW.

#### B. Project output, outcome, and impact

- 4. The project's output, outcomes and impact, as outlined in the project document submitted to the Board, are as follows:
  - **Output**. Successful implementation of the project will result in installation and operation of 100MW of solar photovoltaic power capacity by the end of 2018.
  - Outcome. The project was expected to generate 110 million kilowatt hours (kWh) of electricity in 2019, the first full year of operations with the entire capacity installed. Average annual generation over 20 years was estimated at approximately 98.6 million kWh of electricity. By generating electricity from renewable energy sources, the project would lead to avoidance of approximately 73,000 tons of carbon dioxide emissions annually.
  - **Impact**. The stated project impact was as follows: "increased share of solar power in the energy mix of the country". The corresponding target indicator was "installed solar power capacity increases to 100 gigawatts (GW) by the year 2020".
- 5. Following the change in tariff regime in May 2018, the project underwent revisions to its scope, output, and expected outcomes. The revised objective aimed to commission 65 MW of solar power capacity by 2020. In 2021, the project was expected to generate 71.5 million

kWh of electricity, leading to an annual reduction of 49,000 tons of carbon dioxide emissions.

## III. Assessment of project performance<sup>1</sup>

#### A. Relevance

- 6. Relevance of objectives. The project is fully aligned with China's national development priorities, as reflected in the 12<sup>th</sup> and 13<sup>th</sup> five-year plans (FYPs) for energy and economic development. These plans prioritize the shift to a low-carbon energy system to achieve balanced, inclusive, and climate-resilient economic growth. It also reflected the development priorities of Shanghai Municipality, particularly in diversifying local energy mix and promoting the deployment of clean energy technologies. Project objectives were also consistent with NDB's general strategies of 2017-2021 and 2022-2026, where the shift to a more sustainable energy path is a key operational focus. Moreover, the project's objectives would contribute to China's fulfilment of carbon pledges under the Paris Agreement,<sup>2</sup> and were aligned with three of the Sustainable Development Goals (SDGs), respectively, on clean energy (SDG 7), sustainable cities (SDG 11) and climate action (SDG 13).
- 7. Relevance of project design. The output and outcome indicators are generally clear and measurable, aligning well with each other. The project output is 65 MW and the impact indicator is "installed power capacity increases to 100 GW by 2020." Upon closer examination, the project's contribution to the impact indicator though aligned with the broader thematic, sector, country-level goals as per the definition used by NDB appears relatively minor in the context of the extent to which the project has generated higher level effects. Notwithstanding these considerations, and acknowledging NDB's approach to the theory of change within the design and monitoring framework (DMF), it is observed that the project's articulation of the alignment of project's impact-to-outcomes is not explicit. Such limitations in the DMF are not fully justified, given that ample good practices on such topics were easily accessible across the multilateral development bank (MDB) world at the time when this project was designed, which NDB could have better leveraged.
- 8. Furthermore, absence of a thorough rooftop resource assessment in the design, especially in the context of covering a larger sample size across Shanghai, led to a lower-

<sup>&</sup>lt;sup>1</sup> Annex I gives a description of the evaluation criteria for PCRVs of public sector operations. Additionally, annex II, tables 1 and 2, provide the definition of the rating scale and the score descriptions, respectively.

<sup>&</sup>lt;sup>2</sup> In June 2015, China submitted its first Nationally Determined Contributions to the United Nations Framework Convention on Climate Change as part of the commitment under the Paris Agreement, aiming to peak carbon dioxide emissions and increase the non-fossil share in primary energy to 20% by 2030.

<sup>&</sup>lt;sup>3</sup> Asian Development Bank (ADB) guidelines mention that the project impact must be directly aligned to the project outcomes: https://www.adb.org/sites/default/files/institutional-document/32509/guidelines-preparing-dmf.pdf

than-expected availability of suitable sites during the implementation stage, significantly extending the project's timeline by one year. Although this extension primarily stemmed from the need to adapt to policy changes, nevertheless, a more robust rooftop resource assessment could have proactively mitigated these risks.

9. **PCRV rating**. Nevertheless, the revision in targets, and the extension of project's timeline was necessary due to the policy change. IEO recognizes that this was one of the earliest NDB-financed projects and the Bank had limited capacities at the time and was probably focused more on loan commitments at the outset of its operations. Therefore, the PCRV rates project relevance as "successful" (5), in line with the PCR's assessment.<sup>4</sup>

#### B. Effectiveness

- 10. Given the changes and underlying rationale to project design was discussed and assessed in the previous section, in this section, the PCRV assesses project's effectiveness based on the revised targets.
- 11. **Output.** The project successfully implemented and attained its output target: the installation and operation of 65 MW in distributed photovoltaic (DPV) subprojects by the end of 2020, in alignment with the revised project scope.
- 12. <u>Outcome.</u> In response to a scaled-down scope, an adjusted electricity generation target of 71.5 million kWh, and a reduced carbon dioxide reduction goal of 49,000 tons was established. The project generated about 73 million kWh of electricity in the first year of full capacity operation (2021), and around 46,133 tons of CO2 emissions are estimated to have been avoided annually during the project life after completion.
- 13. The electricity generated is 3% higher than the outcome targets adjusted to the amended project scope,<sup>5</sup> however, reduction of CO<sup>2</sup> emissions is slightly lower (5.9%) than the revised target primarily because a more conservative "effective hour" was used at completion.<sup>6</sup>
- 14. **PCRV rating.** Based on this analysis, the project has met its revised objectives adequately, with the reduction in CO<sup>2</sup> emissions slightly below the revised target. Therefore, the PCRV rates project effectiveness as "successful" (5), in line with the PCR's assessment.

#### C. Efficiency

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<sup>&</sup>lt;sup>4</sup> Refer to annex III, table 1 to see the comparison between the ratings assigned by NDB Management in the PCR and IEO in the PCRV.

<sup>&</sup>lt;sup>5</sup> The outperformance is primarily attributed to better weather and sunlight conditions in 2021.

<sup>&</sup>lt;sup>6</sup> Project life is considered as the period when the project is operated with a full capacity of 65MW. At appraisal the DVP plants under the Project concentrated in the Lingang area which is one of the most abundant areas of sunshine resources in Shanghai. During implementation, the DVP plants were scattered throughout Shanghai. Therefore, the effective operating hours of the project were reduced to 1,050 hours, taking into account the sunshine resources in different locations of DVP plants on a conservative basis.

- 15. <u>Timeliness</u>. In the context of project efficiency, the PCR does not highlight the one-year delay in loan effectiveness. The delay is attributed to the project implementation agency's (PIA) unfamiliarity with Chinese administrative procedures for projects financed by MDBs. This issue could however have been mitigated and the delay could have been limited with the provision of technical assistance by the NDB and more thorough capacity-building of the PIA upfront.
- 16. The PCR also does not mention the two-year time-period for addressing changes to the project's scope caused by the subsidy cuts in May 2018. Although the delay was triggered by external policy changes, recognizing that policy shifts are inevitable and can introduce uncertainties, the two-year duration it took to respond and restructure the project culminating in amendment no. 2 to the loan agreement with NDB not being executed until May 2020 indicates a lack of timely and efficient project adaptation mechanisms.
- 17. <u>NDB funding and disbursements.</u> At project completion, NDB disbursed RMB 222.61 million i.e. 91.7% of the revised loan amount of RMB 242.85 million. Firstly, it fell short of disbursing 100% of the revised NDB loan amount. Secondly, the disbursed amount (RMB 222.61 million) is less than 50% of the initially approved amount (RMB 525 million).
- 18. Despite recognizing potential reductions in project costs from advances in domestic PV technology, industry scale advantages, and decreasing costs of key equipment, the initial assessment of the costs following the revision of scope significantly underestimated the magnitude of project's cost reduction.<sup>7</sup> Even without a scope reduction, a significant portion of NDB loan would have been returned, causing unnecessary logistical challenges including delays arising from the complexities of the return process, particularly concerning regulations related to commitments made by the borrower, such as commitment charges and interest rates.
- 19. <u>Economic/cost-benefit analysis.</u> The project's economic internal rate of return (EIRR) was recalculated considering updated forecasts for electricity generation, emission reduction, economic costs, and benefits. The EIRR at completion<sup>8</sup> is 14.0% (low carbon price) and up to 16.7% (high carbon price),<sup>9</sup> exceeding the initial estimate of 12.8%. Although the

<sup>&</sup>lt;sup>7</sup> The project's unit costs were reduced from 7.5RMB/Watt to 5.0RMB/Watt. RMB 302.39 million (57.6%) of the original NDB loan amount was cancelled.

<sup>&</sup>lt;sup>8</sup> A more conservative emission factor of 0.420 tCO2/MWh was used for economic analysis following the Shanghai Municipal Bureau of Ecology and Environment's Notice on Adjusting the Value of Emission Factors Related to the Municipal Greenhouse Gas Emission Accounting Guidelines released in February 2022.

<sup>&</sup>lt;sup>9</sup> Assumptions for carbon prices are based on World Bank's "Guidance Note on Shadow Price of Carbon in Economic Analysis". Given the unpredictability of future socioeconomic and technological trends towards achievement of the climate goals under the Paris Agreement, the guidance note recommends use of both low and high values of carbon price derived from the study led by Joseph Stiglitz and Nicholas Stern. Available here: https://thedocs.worldbank.org/en/doc/911381516303509498-

economic net present value (ENPV) decreased due to decreased project scope, sensitivity analysis confirms the **project's economic viability**, even with a simultaneous 20% increase in operation and maintenance costs, and a 20% decrease in benefits.

20. **PCRV rating.** While recognizing the reduction in project unit costs from 7.5 RMB/Watt to 5.0 RMB/Watt at completion, the evaluation takes into account the lengthy time taken from approval to effectiveness, a two-year time-period in addressing changes to the project's scope caused by the subsidy cuts in May 2018., and excessive loan allocation at design as compared to total disbursement at completion. Consequently, IEO rates project efficiency as "moderately successful" (4), as compared to "successful" (5) in the PCR.

#### D. Impact

- 21. The project impact was "increased share of solar power in the energy mix of the country" and the target indicator was "installed solar power capacity increases to 100 GW by the year 2020". The PCR correctly states the statistics on China's total installed solar PV capacity (253 GW) at the end of 2020<sup>10</sup> which is 153% higher than the original target (100 GW).
- 22. However, two issues with the impact criteria, not emphasized in the PCR, need consideration. Firstly, the project's contribution to the impact indicator though aligned with the broader thematic, sector, country-level goals as per the definition used by NDB appears relatively minor in the context of the extent to which the project has generated higher level effects. Secondly, it's advisable for the impact of the project to align with the project outcome. While the project output reflects the immediate and tangible results, such as the installation of 65 MW, the project outcome captures more significant changes resulting from these outputs, like generating 73 million kWh of electricity and reducing carbon emissions by 46,133 tonnes.
- 23. **PCRV rating**. Nevertheless, based on the data and evidence reviewed, the PCRV rates project impact as "successful" (5), in line with the PCR rating.

#### E. Sustainability

24. Operation and maintenance. PIA established a dedicated operation and maintenance (O&M) unit for DPVs under the project, supported by an experienced O&M contractor, who has operated more than 1.5 GW solar PV plants. Both the PIA and the contractor have actively engaged in O&M activities since the commissioning of the first two sub-projects (for Greif Packaging Co. Ltd. 718 and 818) and accumulated abundant experience for managing the DPV facilities.

<sup>&</sup>lt;sup>10</sup> National Development and Reform Commission (NDRC) & NEA. 2022. https://www.ndrc.gov.cn/xwdt/tzgg/202206/P020220602315650388122.pdf

- 25. <u>Financial sustainability.</u> The project's recalculated post-tax financial internal rate of return (FIRR) is 6.15%, lower than the 7.25% estimated at appraisal, primarily due to a change in the tariff regime. Despite a reduced subsidy and scope adjustment, the project's FIRR remains higher than the updated weighted average cost of capital (WACC) of 2.40%, affirming its financial viability. However, without government support and subsidies, the FIRR would drop to 0.54%, indicating financial non-viability. In the context of this project, where there has been a significant rollback in government subsidies, it is not only reasonable but imperative to include a counterfactual scenario in the financial analysis. This approach is crucial for comprehensively understanding the project's resilience and sustainability under varying economic conditions.
- 26. Environmental and social sustainability. The project complied with essential environmental and social (E&S) licences. As a significant portion of the 37 sub-projects were rooftop installations of solar PV panels, approximately 350 acres of land were conserved, minimizing land use. Utilizing existing rooftop space also helped in avoiding the need for rehabilitation and preventing any negative impacts on vulnerable communities. Infact, the project fostered positive impacts by creating job opportunities for local residents. The procurement strategy prioritized non-toxic materials, engaging reputable manufacturers for responsible lifecycle management, including recycling. Additionally, the project is estimated to annually avert approximately 46,133 tons of CO<sup>2</sup> emissions.
- 27. **PCRV rating.** Based on this analysis, the project shows sustainability in operations and maintenance, environmental and social aspects, and financial performance, provided it receives government support and subsidies. Therefore, the IEO assesses the project's sustainability as "successful" (5), which is consistent the PCR's assessment.

#### F. Overall project achievement

28. The overall project achievement is not a simple mathematical average of the ratings assigned to the five evaluation criteria discussed earlier. Nevertheless, if we calculate the average ratings assigned by IEO to each of the aforementioned criteria, it would be equal to 4.8 on a rating scale from 1 to 6. Taking this into account and considering IEO's wholistic assessment of the project, the PCRV rates "overall project achievement" as "successful" (5), which is the same as in the PCR – in spite of the "moderately successful" (4) rating assigned to the efficiency criteria. See table 1 below.

**Table 1: Summary of evaluation ratings** 

Criterion	IEO rating	
Relevance	Moderately successful	5
Effectiveness	Successful	5
Efficiency	Moderately successful	4
Impact	Successful	5
Sustainability	Successful	5
Overall project achievement	Successful	5

## IV. Performance of partners

## A. NDB performance

- 29. During appraisal, NDB conducted due diligence and consulted sector experts to finalize project design. The areas that merited deeper attention in project design have been covered under the relevance section and are therefore not again addressed separately under NDB performance. Throughout implementation, NDB maintained active contact with the PIA, providing guidance on withdrawal requests, sub-project approval, reporting format and contents, procurement, and more.
- 30. NDB conducted a series of missions to monitor project progress, including one supervision mission, two project review missions, two implementation missions, and one physical inspection mission. NDB also conducted a mid-term project evaluation that took place in June 2020. However, the Bank lacks a systematic repository for project documentation, making timely access to documentation cumbersome. IEO was able to access project documents only upon an e-mail request to the Operations Department, which made the documents promptly available.
- 31. Throughout project implementation, there were frequent changes in NDB leadership of the project (i.e. NDB staff assigned with responsibility as project team leader[ PTL]) with 7 shifts among 5 leaders from 2016 to 2020. While each leader guided the project earnestly, such frequent changes in PTLs undermines continuity in dialogue and follow up actions needed during implementation. Moreover, different PTLs had different requirements and standards for periodic reports to be submitted by the PIA, and also had varying

- interpretation to similar implementation issues, causing undue challenges for local counterparts.
- 32. At project completion, the only knowledge product produced by NDB was the PCR and there were no stakeholder workshops organized to enhance outreach and share key lessons and recommendations.
- 33. Additionally, a review of multiple PCRs indicates that the common timeframe for delivery tends to range between 1 to 2 years. The PCR for this project was prepared 2.5 years after project completion, a significant delay among standard MDB practices. While the PCR rightly points out the absence of a specific NDB project evaluation methodology, it's pertinent to consider leveraging established international guidelines, such as those provided by the Evaluation Cooperation Group (ECG).
- 34. In light of these factors, IEO rates NDB's performance as "moderately successful" (4), as compared to "successful" (5) in the PCR.

#### **B.** Borrower performance

- 35. The **project entity (PE)** and **borrower** proactively addressed challenges related to the change in tariff regime, signing revisions to the loan agreement, such as scope, completion timeline, and loan amount. The PE organized coordination meetings, reported issues to authorities, and facilitated the issuance of a new policy in June 2020.
- 36. Initial delays in loan effectiveness and preparation of periodic reports were experienced due to the **PIA's** unfamiliarity with China's administrative procedures for MDB-financed projects. Weak performance of the PIA, limited management capacity and unfamiliarity with the financial management of the project caused issues related to bidding, funds flow, and low utilization of the loan, issues that have been identified in the audit report. PIA produced four progress reports of adequate quality and on March 3, 2021, the PIA submitted the borrower's project completion report (BPCR). The timeliness and the quality of the BPCR was found to be satisfactory. During implementation, PIA retained strong commitment to the project and exercised effective coordination among key stakeholders to mitigate the negative impacts brought by the changing policy and COVID-19.
- 37. **Civil work contractors** completed construction on time and at acceptable quality. **Suppliers** delivered materials and equipment as per contract terms. The **project consultant's** efficient cooperation with the PIA, executing assigned tasks efficiently, ensuring timely preparations before mobilization, and contributing to safety management and data reporting ensured smooth project implementation.
- 38. While generally the borrower provided timely supports and inputs, taking into account the delays in loan effectiveness, and submission of some of the progress reports, IEO rates borrower's performance as "successful" (5), in line with the PCR.

## V. Assessment of PCR quality<sup>11</sup>

- 39. **General observations about the PCR**. The PCR has largely followed the methodology outlined in the "PCR validation: methodology and process" document approved by the Board in March 2023. There are few matters that merit consideration for the future, which are not considered significant, but worth underling. Firstly, the use and presentation of the core evaluation criteria should follow the internationally recognized sequence of: relevance, effectiveness, efficiency, impact and sustainability. This is merely a presentational issue to ensure consistency across PCRs moving forward. Secondly with reference to table 4 in the PCR NDB and borrower performance would not be included in the assessment of overall project achievement (as also noted in the above-mentioned document). Thirdly, what is called "overall assessment" in the PCR would instead be called "overall project achievement" as also reflected in the same above-mentioned document (see para 6).
- 40. Candour. There are two points regarding the candour of the PCR. Firstly, under relevance, and efficiency, and impact the PCR narrative tends to focus generally on positive aspects and does not highlight areas of improvement. Secondly, while the evaluation criteria ratings generally align with the narrative in the PCR, the justification for assigning a "successful" (5) rating to the project's impact and sustainability aspects not supported by explicit discussion regarding the limitations or setbacks that might have warranted a lower rating than the optimal "highly successful" (6). The PCRV therefore rates PCR's candour as "moderately successful" (4).
- 41. **Lessons learned.** IEO appreciates the inclusion of a dedicated lessons learned section in the PCR, deeming it a good practice that should be replicated in all PCRs prepared by NDB. While the lessons touch on significant aspects of the project, they seem to be a mix of observations, assessments of challenges faced, and potential improvements, rather than "lessons learned". For example, "Mitigating policy uncertainties requires robust regulatory framework risks assessment and extensive consultation with sectoral authorities at a national level. Although subsidy rollback risk was identified and mitigations were proposed during appraisal, it was not anticipated that this risk would materialize in such a magnitude. Active following up on sector trends and maintaining close contact with sectoral authorities at both preparation and implementation stages would facilitate proactive actions and enable quick response when risks arise," could be rephrased to "Continuous monitoring of sector trends and maintaining close communication with sectoral authorities throughout the project preparation and implementation stages are

<sup>&</sup>lt;sup>11</sup> Refer to annex III, table 2, to see the ratings of the PCR quality.

<sup>&</sup>lt;sup>12</sup> As one definition, a lessons learned is: the knowledge gained during a project, which shows how project events were addressed or should be addressed in the future, for the purpose of improving future performance.

essential to take proactive actions and respond swiftly to emerging risks, ensuring better adaptability to regulatory changes." The PCRV notes that the project's shortcomings described in this section would have been better placed in other sections of the PCR (e.g. effectiveness, efficiency or relevance) for a balanced assessment and a better understanding of the shortcomings. In general, however, the PCRV rates the lessons learned criterion as "successful" (5).

- 42. **Scope.** As mentioned above, the PCR used the evaluation criteria agreed with the Board and has applied them quite coherently. However, certain statements in the PCR lack supporting documentation. For example, there is no explanation for the two-year time-period taken to adapt to the uncertainties posed by the subsidy cut in May 2018 finalizing the second loan agreement amendment only in May 2020, which implemented both the reduction in project scope and an extension in project completion. Hence, the PCRV rates the scope of the PCR as "moderately successful" (4).
- 43. **Coverage.** Due to the absence of stakeholder workshops, feedback mechanisms, and post-project knowledge dissemination, which are important for outreach, visibility and to share key lessons and recommendations, the PCRV rates the PCR coverage as "successful" (5).
- 44. **Overall quality of PCR.** Based on the ratings of the above four criteria, the PCRV determines the overall quality of the PCR to be between moderately successful (4) and successful (5). While IEO commends NDB operations for producing a thorough PCR, there are matters that merit attention for the future (apart from those in para. 41 above) for example, reducing the significant delays in the production of the PCR following project completion, the need for deeper supporting evidence in determining project performance and assigning ratings, and a more coherent articulation of lessons learned for the future.

#### Annex I

## Definition of evaluation criteria for PCRVs of public sector operations

**Relevance**. The assessment of relevance will examine the extent to which: (i) the objectives of the project are consistent with beneficiaries' requirements, country needs, institutional priorities and partner and donor policies; (ii) the design of the project is consistent with the objectives; and (iii) the project design has been (re-) adapted to address changes in the context. Finally, under relevance, an assessment will also be made of the compatibility of the intervention with other interventions in a country, sector or institution.

**Effectiveness**. The extent to which the project achieved, or is expected to achieve, its objectives and results at the time of the evaluation, including any differential results across groups. The analysis of effectiveness involves taking account of the relative importance of the objectives or results.

**Efficiency** focusses on how well resources are used. In particular, the assessment of efficiency will examine the extent to which the project delivers, or is likely to deliver, results in an economic and timely manner.

**Impact**. The extent to which the project has generated, or is expected to generate, significant positive or negative, intended or unintended, higher-level effects.

**Sustainability** assesses whether project benefits will last or are expected to last after completion. More specifically, sustainability is about whether the net benefits of the project will continue or are likely to continue.

**NDB and borrower performance**. This criterion assesses the contribution of partners to project design, execution, monitoring and reporting, supervision and implementation support, and evaluation. The performance of each partner will be assessed on an individual basis with a view to the partner's expected role and responsibility in the project life cycle.

## Annex II

# Rating scale

Table 1: Definition of rating scale

Rating (numeric value)	Description
6	Highly Successful
5	Successful
4	Moderately Successful
3	Moderately Unsuccessful
2	Unsuccessful
1	Highly Unsuccessful

**Table 2: Score descriptions** 

Rating	Score (rating) descriptor
6	Under the concerned criterion, the activity (project, programme, non-lending, etc.) achieved or surpassed all main targets, objectives, expectations, and results and could be considered as a model within its project typology.
5	Under the concerned criterion, the activity achieved almost all (indicatively, over 80-95 per cent) of the main targets, objectives, expectations, and results.
4	Under the concerned criterion, the activity achieved the majority (indicatively, 60 to 80 per cent) of the targets, objectives, expectations, and results. However, a significant part of these was not achieved.
3	Under the concerned criterion, the activity did not achieve its main targets (indicatively, less than 60 per cent), objectives, expectations, and results.
2	Under the concerned criterion, the activity achieved only a minority of its targets, objectives, expectations, and results.
1	Under the concerned criterion, the activity (project, programme, non-lending, etc.) achieved almost none of its targets, objectives, expectations, and results.

# Annex III Table of ratings

Table 1: Rating Comparison: PCR (NDB Management) and PCRV (IEO)

Evaluation Criteria	PCR rating	PCRV rating	Disconnect (PCRV rating – PCR rating)
Relevance	5	5	0
Effectiveness	5	5	0
Efficiency	5	4	-1
Impact	5	5	0
Sustainability	5	5	0
Overall Project Achievement	5	5	0
NDB Performance	5	4	-1
Borrower Performance	5	5	0

Table 2: Rating of the project completion report quality

Criteria	Rating
Candour	4
Lessons learned	5
Scope	4
Coverage	5
Overall quality	4.5