

# The New Development Bank

## Its Role in Achieving BRICS Renewable Energy Targets



**Institute for Energy Economics  
and Financial Analysis**  
IEEFA.org

**October 2016**

**Jai Sharda, Equitorials**

# Executive Summary

The BRICS Forum, consisting of Brazil, Russia, India, China and South Africa, has resulted in the establishment of the New Development Bank (NDB), set up to fund infrastructure projects in developing countries and promote sustainable development. NDB's objectives are in line with the BRICS countries' own development goals, with an increased focus on sustainable development, manifested in their Intended Nationally Determined Contributions (INDCs).

The BRICS countries, in order to achieve their INDC targets, have plans to source a much higher proportion of their electricity requirements from renewable sources. As a group, the BRICS nations have plans to raise their total installed renewable capacity, including large hydropower, to 1251 gigawatts (GW), over varying time horizons to 2020-2030. Within the BRICS group, China and India have remarkably large renewable capacity addition goals, with China targeting to add 253GW by 2020 and India targeting to add 138GW by 2022.

The cumulative average requirement of investment to achieve BRICS countries' capacity addition targets is US\$177Bn annually. In comparison, these countries witnessed a total investment of US\$126Bn in the renewable energy sector in 2015 – a shortfall of US\$51Bn. Excluding China, the other four BRICS countries require an average annual investment of US\$52Bn. However, in 2015, these countries witnessed an investment of US\$23Bn – less than half the required amount.

There is a large amount of private funds available globally to help bridge this investment gap. However, there are a number of barriers, like higher real and perceived risks in developing countries, lack of relevant data points of successes and failures etc, that impede the flow of private finance into the renewable energy sector in developing countries. In this scenario, public funds can act as catalysts to channel private funds into this sector through Blended Finance mechanisms.

Under Blended Finance, it is estimated that public funds can catalyze about 4 times private investment in the clean energy initiatives in the BRICS countries. This implies that there is a requirement of about US\$10Bn of public funds to catalyze private funds of around US\$41Bn, in order to bridge the annual investment gap of US\$51Bn that the renewable energy sector of BRICS countries faces.

NDB has advanced loans of US\$911 mn till date, all of which have been extended to finance clean energy projects. However, going ahead, NDB plans to raise its loan book size by US\$1.2Bn annually<sup>1</sup> – only 11.7% of the annual public investment required to bridge the US\$51Bn investment gap. Clearly, there is a need for NDB to accelerate its growth while continuing to focus on renewable energy projects, in order to help the BRICS nations meet their renewable energy capacity addition goals.

---

<sup>1</sup> Refer Annexure I for details on New Development Bank's expansion plans

# Introduction

Since its formation in 2011, the BRICS Forum, comprising of the developing countries of Brazil, Russia, India, China and South Africa, has witnessed increased cooperation between its member states. One of the major outcomes of this cooperation has been the formation of the New Development Bank (NDB), previously known as the BRICS Bank.<sup>2</sup>

After being founded in 2013, NDB has made the first round of loan advances – one loan each to its member states. The loan book size has grown to US\$911 mn. Going ahead, NDB plans to expand its loan book by an estimated US\$1.2Bn annually over the next three years. The objectives of the NDB include promotion of infrastructure development in developing countries and bringing about sustainable development. This is also reflected in its lending pattern – the loans that NDB has extended so far have all been in the clean energy domain.

NDB's objectives reflect the broader goals of the BRICS countries themselves. As a group of developing countries that are at various stages of development, one of the key thrusts of the BRICS countries is on infrastructure development, especially to meet their growing electricity needs. However, with the declarations of their respective Intended Nationally Determined Contributions (INDCs), and backed by the ratification of the Paris Agreement adopted in CoP 21 by Brazil, India and China,<sup>3</sup> the BRICS countries have now shown a greater commitment to promote sustainable development.

## Plans of BRICS Countries on Renewable Sources of Electricity

As part of meeting their INDC goals, the BRICS countries have plans to source a higher proportion of their energy needs from renewable sources. China and India especially have highly aggressive renewable capacity addition plans to meet their future electricity needs.

### Brazil

Around 74% of electricity generated in Brazil in 2015 was from non-fossil sources, including large hydropower.<sup>4</sup> Going ahead, there is a larger focus on development of renewable sources of electricity – Brazil's 2024 Energy Plan envisages an increase in total installed renewable capacity, including large hydropower, from 106.4 gigawatts (GW) in 2014 to 173.6GW in 2024. In December 2016, a massive 32.1GW of wind and solar capacity is set to

---

<sup>2</sup> Refer Annexure I for details on the New Development Bank

<sup>3</sup> [http://unfccc.int/paris\\_agreement/items/9444.php](http://unfccc.int/paris_agreement/items/9444.php)

<sup>4</sup> <http://www.mme.gov.br/documents/10584/3580500/06+-+BRIC+Energy+Indicators+%28year+-+2015%29+%28PDF%29/470882ae-364b-4d37-8463-8f1220016315?version=1.2>

be auctioned in Brazil.<sup>5</sup> This comes on the back of auctions of 833MW solar capacity in September 2015 that witnessed tariffs in the range of US\$78-85/MWh.<sup>6</sup> Brazil's renewable capacity expansion plans would require an investment of US\$86Bn, or 85.2% of overall electricity generation capacity investment.<sup>7</sup> Additionally, Brazil is targeting to invest US\$41Bn in developing its transmission lines. Assuming that 85.2% of the overall investment required in developing the transmission networks is attributable to additional renewable energy generation, this entails another US\$35Bn investment owing to renewable energy capacity expansion. Accordingly, Brazil would require a total investment of US\$121Bn over 2014-24 – or US\$12Bn annually – to meet its renewable capacity addition targets. In 2015, Brazil saw committed investment of US\$7Bn for developing renewable energy projects.<sup>8</sup>

## Russia

Russia generated 16% of its electricity from renewable sources in 2015, while fossil fuels constituted 66% of its energy generation. Excluding large hydropower capacity, other renewable sources of electricity are less than 1% of Russia's generation capacity. Russia has declared a target to reduce emissions by 25-30% over 1990 levels, as a part of its INDC goals. Since 1990, however, emissions have already declined by 40-50%, implying that according to its INDC, Russia could actually increase its emissions by 2030.<sup>9</sup> Russia plans to increase the share of renewable energy in the electricity sector to 4.5% by 2020. Reaching this target would require a renewable energy capacity addition of 22.0GW and an investment of US\$44Bn – or US\$11Bn each year from 2016 to 2020.<sup>10</sup> However, Russia had little investment in renewable energy capacity addition in 2014 – the 17 nations in the Russian Federation had less than US\$1Bn investment in renewable energy in 2014.<sup>11</sup>

## India

India's electricity generation from renewable sources is estimated to be 17% and is projected to rise to 25% by 2022,<sup>12</sup> and an impressive 40% by 2030.<sup>13</sup> As part of its INDC targets, India aims to reduce its emissions intensity by 33-35% over the 2005 levels, by 2030. In 2014, India announced aggressive renewable energy addition targets – aiming to increase the installed renewable energy capacity, including large hydro, to 225GW from 97GW in August 2016.<sup>14</sup>

<sup>5</sup> [http://www.pv-magazine.com/news/details/beitrag/134-gw-of-solar-submitted-brazils-december-auction\\_100025715/#axzz4MokaqrHL](http://www.pv-magazine.com/news/details/beitrag/134-gw-of-solar-submitted-brazils-december-auction_100025715/#axzz4MokaqrHL)

<sup>6</sup> <http://www.greentechmedia.com/articles/read/Brazil-Announces-the-Winners-of-Its-833-MW-Solar-Auction>

<sup>7</sup> [http://www.mme.gov.br/documents/10584/3642013/02+-+Electricity+in+the+2024+Brazilian+Energy+Plan+\(PDF\)/96be552a-4a2c-4a32-839a-f51299c911fb;jsessionid=746214DDE00CF35D18615B00C7AA0E01.srv155?version=1.1](http://www.mme.gov.br/documents/10584/3642013/02+-+Electricity+in+the+2024+Brazilian+Energy+Plan+(PDF)/96be552a-4a2c-4a32-839a-f51299c911fb;jsessionid=746214DDE00CF35D18615B00C7AA0E01.srv155?version=1.1)

<sup>8</sup> [http://fs-unep-centre.org/sites/default/files/publications/globaltrendsrenewableenergyinvestment2016lowres\\_0.pdf](http://fs-unep-centre.org/sites/default/files/publications/globaltrendsrenewableenergyinvestment2016lowres_0.pdf)

<sup>9</sup> <http://www.wri.org/blog/2015/04/russia%E2%80%99s-new-climate-plan-may-actually-increase-emissions>

<sup>10</sup> [http://www.ifc.org/wps/wcm/connect/RegProjects\\_Ext\\_Content/ifc\\_external\\_corporate\\_site/home-rrep](http://www.ifc.org/wps/wcm/connect/RegProjects_Ext_Content/ifc_external_corporate_site/home-rrep)

<sup>11</sup> [http://www.ren21.net/wp-content/uploads/2016/06/GSR\\_2016\\_Full\\_Report.pdf](http://www.ren21.net/wp-content/uploads/2016/06/GSR_2016_Full_Report.pdf)

<sup>12</sup> IEEFA estimates

<sup>13</sup> [http://mnre.gov.in/file-manager/annual-report/2015-2016/EN/Chapter%201/chapter\\_1.htm](http://mnre.gov.in/file-manager/annual-report/2015-2016/EN/Chapter%201/chapter_1.htm)

<sup>14</sup> [http://cea.nic.in/reports/monthly/executivesummary/2016/exe\\_summary-08.pdf](http://cea.nic.in/reports/monthly/executivesummary/2016/exe_summary-08.pdf)

This transition would require an additional investment of US\$128Bn,<sup>15</sup> or an annual investment of US\$21Bn. India also needs an annual investment of US\$5.0Bn over the next decade to upgrade its grid to handle large amounts of electricity generation from renewable sources<sup>16</sup> - implying a total annual investment requirement of US\$26Bn. In comparison, the investment made into the renewable sector in India was US\$10Bn in 2015.

## China

China generated 74% of its electricity from fossil fuels in 2015. Going ahead, with an INDC target to reduce emission intensity by 60-65% over the 2005 levels, China is estimated to increase its solar capacity to 127GW by 2020 from 43GW at the end of 2015,<sup>17</sup> and wind capacity from 145GW in 2015<sup>18</sup> to 250GW by 2020.<sup>19</sup> Hydropower capacity is estimated to grow by 65GW over the same period, increasing from 320GW in 2015 to 384GW in 2020. China would need a total investment of US\$254Bn to achieve its renewable power targets by 2020. Additionally, China would also require US\$368Bn investments for grid enhancement,<sup>20</sup> implying a total investment required of US\$622Bn, or an annual investment of US\$124Bn.

## South Africa

South Africa has a heavy reliance on fossil fuel, with 94% of the overall energy generation coming from fossil fuel based generation. However, South Africa's Renewable Energy Independent Power Producer Programme (REIPPP) has pushed the installed renewable power capacity to 2.1GW in March, 2016<sup>21</sup> from 1.8GW in March 2015, while 6.3GW capacity has been awarded PPAs over November 2011 to September 2016.<sup>22</sup> The REIPP has also led to a decline in solar power costs by 75% and wind power costs by 50%. Going ahead, South Africa plans to continue the progress on REIPP and install 17.8GW of renewable energy by 2030.<sup>23</sup> As per South Africa's INDC, the estimated investments required for renewable energy addition plan is around US\$3Bn per annum for the next 10 years.<sup>24</sup>

---

<sup>15</sup> <http://mnre.gov.in/file-manager/UserFiles/Announcement-RE-INVEST-2016.pdf>

<sup>16</sup> [http://trade.gov/topmarkets/pdf/Smart\\_Grid\\_India.pdf](http://trade.gov/topmarkets/pdf/Smart_Grid_India.pdf)

<sup>17</sup> [http://www.pv-magazine.com/news/details/beitrag/china-sets-slightly-lower-solar-target-for-2016\\_100022589/#axzz4LekFEt1V](http://www.pv-magazine.com/news/details/beitrag/china-sets-slightly-lower-solar-target-for-2016_100022589/#axzz4LekFEt1V)

<sup>18</sup> [http://www.gwec.net/wp-content/uploads/vip/GWEC-Global-Wind-2015-Report\\_April-2016\\_19\\_04.pdf](http://www.gwec.net/wp-content/uploads/vip/GWEC-Global-Wind-2015-Report_April-2016_19_04.pdf)

<sup>19</sup> [https://www.iea.org/publications/freepublications/publication/china\\_wind.pdf](https://www.iea.org/publications/freepublications/publication/china_wind.pdf)

<sup>20</sup> <http://cleantechnica.com/2016/03/27/china-solar-pv-capacity-triple-by-2020/>

<sup>21</sup> <https://www.biznews.com/sustainable-business/2016/10/05/eskom-utility-in-crisis-ngo-takes-aim-at-ceo-brian-molefe/>

<sup>22</sup> <http://reneweconomy.com.au/2016/victorias-new-renewables-policy-learn-south-africa-32146>

<sup>23</sup> <http://www.energy.gov.za/files/aboutus/DoE-Strategic-Plan-2015-2020.pdf>

<sup>24</sup> <http://www4.unfccc.int/submissions/INDC/Published%20Documents/South%20Africa/1/South%20Africa.pdf>

**Figure 1 – BRICS: Renewable Energy Capacity Addition Targets**

Country	Renewable Energy Capacity Target (GW)	Renewable Energy Investment Required (US\$ Bn)	Target Year	Remarks
Brazil	173.6	121.3	2024	As per 10 year energy plan 2024; Includes proportional transmission
Russia	73.5	44.0	2020	Plans to increase renewable energy share to 4.5%
India	225.3	157.7	2022	Includes US\$ 30 Bn for smart grids till 2022
China	761.0	622.0	2020	Includes US\$ 368 Bn for smart grids
South Africa	17.8	30.0	2030	As per South Africa's INDC
<b>Total</b>	<b>1251.2</b>	<b>975.0</b>		

Source: IEEFA Research

Note: Renewable Energy includes large hydro

## Investment Gap in the BRICS Countries' Renewable Energy Programs

Overall, the BRICS countries have announced targets to add renewable capacity of around 498GW over various time horizons ranging from 2020-2030. Meeting these targets would require an annual investment of around US\$177Bn. In comparison, the investment in the renewable sector in BRICS countries in 2015 was US\$126Bn, leaving an average shortfall of US\$51Bn. China accounts for a large majority of these numbers, given the size of its renewable capacity addition program. Excluding China, the other BRICS nations require an annual investment of US\$52Bn to meet their targets. However, their renewable energy sectors received total investments of US\$23Bn in 2015 – less than half of the requisite investment in future.

This investment gap varies from country to country. Russia and India have the highest ground to cover in investments. India requires around US\$26Bn each year to meet its renewable capacity targets by 2022, including US\$5Bn annually to build a smart grid to handle higher production from renewable sources. However, it managed to channel only US\$10Bn in 2015.

**Figure 2 – BRICS: Annual Investment Required to Meet Renewable Energy Targets**

Country	Annual Renewables Investment Required (US\$ Bn)	Renewables Investment in 2015 (US\$ Bn)	Additional Annual Renewables Investment Required (US\$ Bn)	Target Year
Brazil	12.1	7.1	5.0	2024
Russia	11.0	1.0	10.0	2020
India	26.3	10.2	16.1	2022
China	124.4	102.9	21.5	2020
South Africa	3.0	4.5	-1.5	2030
<b>Total</b>	<b>176.8</b>	<b>125.7</b>	<b>51.1</b>	
Ex-China	52.4	22.8	29.6	

Source: IEEFA Research

## Bridging BRICS' Renewable Energy Investment Gaps – Private Funds vs Public Funds

As per the World Economic Forum report, Global capital market size<sup>25</sup> is currently around US\$218 trillion, but only a fraction of this goes into the clean energy sector in developing countries such as BRICS. Of the two broad sources of capital – private and public – private capital has a large size that can be channeled into the green energy sector.<sup>26</sup> However, public finance has an important role in catalyzing the flow of private finance into the renewable energy sector. Accordingly, the funding gap in the renewable energy plans of the BRICS nations can ideally be bridged by a combination of funds from both, public as well as private sources.

### Private Funds

In the recent years, more private funds, including private equity funds, pension funds, insurance funds etc, have moved into meeting the renewable energy goals of the developing world. Recent developments include:

- The SUSI Renewable Energy Fund II, promoted by the Swiss investment advisor SUSI Partners, has raised 380 million Euros from prominent investors like the Dutch pension

<sup>25</sup> [http://www3.weforum.org/docs/WEF\\_Blended\\_Finance\\_A\\_Primer\\_Development\\_Finance\\_Philanthropic\\_Funders.pdf](http://www3.weforum.org/docs/WEF_Blended_Finance_A_Primer_Development_Finance_Philanthropic_Funders.pdf)

<sup>26</sup> [http://mobile.nytimes.com/2016/09/20/opinion/how-to-raise-trillions-for-green-investments.html?\\_r=0&referrer=https://www.google.co.uk/](http://mobile.nytimes.com/2016/09/20/opinion/how-to-raise-trillions-for-green-investments.html?_r=0&referrer=https://www.google.co.uk/)

fund and European Investment Bank to invest in wind and solar projects with total potential project value of 1 billion Euros.<sup>27</sup>

- BlackRock, the world's largest private investment fund, managing assets worth US\$4.9 trillion, has decided to include climate change as a risk factor in making investment decisions.<sup>28</sup>
- Goldman Sachs, one of the world's biggest financial giants, has invested US\$41Bn into clean energy sector and plans to invest US\$150Bn in the sector over the next decade.

Despite these positive examples, given the riskier and less lucrative nature of sustainability goals of developing countries, there are a number of barriers that impede the flow of private capital into developmental areas like clean energy initiatives in the BRICS countries:

- The real and perceived risks in developing countries are much higher than in the mature markets and this makes the risk-adjusted returns less attractive for potential investors. These risks arise owing to business, macroeconomic, political, legal risks or corporate governance issues.
- Debt and equity markets in most developing countries are less developed compared to the developed nations, acting as a deterrent for private investors.
- Lack of relevant data points of successes and failures, returns etc makes the investment rationale of private investors uncertain.
- Few private investors have a clear mandate for investing in clean energy and sustainable development initiatives.

## Public Funds

In order to overcome the impediments to the flow of private funds into renewable energy sector, public funds need to play a larger role as a catalyst. Public funds can help remove these impediments partially or completely and can in turn attract significant private investment.

- Public funders can take a greater risk exposure for investments by providing partial or full credit guarantees, political risk insurance, currency swaps etc, which can enhance the risk-adjusted returns for private investors, increasing the attractiveness of the investment for them.
- Public funders can develop innovative finance instruments to attract private investors. They can also invest directly by providing equity or debt financing at subsidized rates.
- Public funds can make initial investments and provide relevant data points on successes and failures for private investors to help them make a clear investment decision.

---

<sup>27</sup> <https://www.ipe.com/news/esg/dutch-pension-fund-invests-100m-in-susi-renewables-fund/10015552.fullarticle>

<sup>28</sup> [http://energypost.eu/climate-change-becomes-prime-investment-driver/?utm\\_content=bufferfdc07&utm\\_medium=social&utm\\_source=twitter.com&utm\\_campaign=buffer](http://energypost.eu/climate-change-becomes-prime-investment-driver/?utm_content=bufferfdc07&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer)



- They can also help private investors by providing performance based guaranteed returns and thus can sweeten the deals for them.

## Blended Finance

On one hand public funds are not large enough to address all renewable energy development needs of the BRICS countries. On the other, there are a number of barriers that prevent the flow of private funds into this sector. This scenario calls for another approach – Blended Finance – that combines the advantages of both public and private funds.

Blended finance is the use of public funds to help channel higher amounts of private capital into the targeted sector.<sup>29</sup> Blended finance can play a significant role in allaying fears of private capital investors and making an ecosystem where public development funding can work as a prime mover for attaining developmental goals. Blended finance seems to be a significant answer to address the financing gap between public development funding and total capital required.

## Role of Blended Finance in Bridging the Investment Gaps in BRICS Countries' Renewable Goals

Estimates<sup>30</sup> suggest that public capital can catalyze almost 1-10 times private capital through blended finance route but based on recent case studies and considering the nascent stage of blended finance framework, it can safely be assumed that the public development funding can catalyze about 4 times private investment in the clean energy initiatives in the BRICS countries.

Considering BRICS nations' annual incremental clean energy investment requirement of US\$51Bn, BRICS nations would need an additional US\$10Bn public investment (assuming a blended finance leverage of 4x).

## NDB as a Catalyst for Blended Finance

In the context of the BRICS countries, development banks like the NDB can prove to be a major catalyst in bringing private investments into their renewable energy plans through blended finance mechanisms. As an example, the Asian Development Bank (ADB) has

---

<sup>29</sup> For more details on and examples of Blended Finance, please refer to Annexure II

<sup>30</sup> <http://dalberg.com/blog/?p=3565>

planned to contribute US\$500mn towards a US\$1 Bn Solar Rooftop Investment Program in India.<sup>31</sup>

Historically, NDB has played this role of a catalyst well, given that NDB's entire loan book has financed clean energy projects. However, there are signs that suggest NDB may be on a path to dilute this focus – the projects that NDB has been evaluating include a high speed railway line and road construction projects.<sup>32,33</sup>

This is contrary to the pressing funding requirements to help the BRICS countries achieve their renewable energy targets. Given the large gap in funding requirements and NDB's potential in bridging this gap, it is imperative that NDB focuses on renewables.

The current target of NDB is to expand its loan book size by around US\$1.2Bn annually – only 11.7% of the incremental capital required from public institutions. Given the large quantum of funding requirement to achieve BRICS nations' renewable capacity addition targets, it may be argued that NDB should accelerate its pace of growth, while continuing its focus on funding renewable energy projects.

## Conclusion

The current renewable energy targets of BRICS countries require an additional annual investment of US\$51Bn on average, which highlights the gap that may be filled by blended finance mechanisms. There are pockets in the renewable energy space e.g. residential rooftop segment that are riskier and less attractive investments for private investors and where development banks like the NDB can play a crucial role in catalyzing private investments. Overall, nearly US\$10Bn needs to come in from public finance institutions annually to channel sufficient private funds to meet the BRICS countries' renewable energy capacity targets.

So far NDB has focused on the clean energy sector, by advancing all of its US\$911mn loans till date to financing renewable energy projects. However, NDB's target of increasing its loan book size by US\$1.2Bn annually means that it will only be able to supply 11.7% of the estimated public finance required to meet BRICS countries' renewable energy targets. This implies that a further push is required by the NDB to propel the BRICS nations into a higher clean energy investment orbit. This also implies that NDB will need to be careful in allocating capital and choosing the projects to lend to. While NDB's focus has been positive so far in terms of lending only to "green" projects, it needs to ensure that going forward it accelerates its growth while continuing to focus on renewable energy projects.

---

<sup>31</sup> <http://renewables.seenews.com/news/adb-to-fund-half-of-usd-1bn-rooftop-solar-programme-in-india-541936>

<sup>32</sup> <http://ndb.int/BRICS-Bank-plans-to-invest-in-construction-of-roads-in-Russia.php>

<sup>33</sup> <http://ndb.int/BRICSBank%20InterestedinMoscow-KazanHighSpeed-Railway-LineProject.php>

# Annexure I

## About New Development Bank

The New Development Bank (NDB), also known as the BRICS Bank, was announced in the fifth BRICS summit in 2013 and the agreement on the Bank was formally entered into force in July 2015. The two broad stated objectives of the NDB are to fund infrastructure projects in developing countries and bringing about sustainable development – “initiatives that bring about growth and employment while ensuring environmental protection”.

The founding members of NDB are the BRICS countries – Brazil, Russia, India, China and South Africa. The initial capital, voting rights and organizational structure have been divided equally amongst the five countries to begin with.

### Capital

The NDB has an authorised capital, i.e. the capital that it is permitted to raise, of US\$100Bn. To begin with, however, NDB has an initial subscribed capital of US\$50Bn, of which shares amounting to US\$10Bn are paid-in shares and shares amounting to US\$40Bn are callable shares.<sup>34</sup>

Additionally, NDB has already raised green bonds in the Chinese Bond markets to the tune of 3Bn Renminbi (US\$450mn) for a 5-year term at an interest rate of 3.07%.<sup>35</sup> The Bank is also looking at the possibility of raising green bonds in Russia.<sup>36</sup>

### Projects Funded

NDB has so far given out 5 loans equivalent to US\$911mn. Each of the founding partners has been extended a loan.

The projects funded so far have been –

1. US\$300mn loan to Brazil's BNDES national development bank
2. US\$100mn loan for Russia's small scale hydroenergy projects in Karelia<sup>37</sup>. The loan, with a maturity of 12 years, is to be released in two tranches of US\$50mn each to the Eurasian Development Bank (EDB) and the International Investment Bank.<sup>38</sup>

---

<sup>34</sup> <http://ndb.int/download/Agreement%20on%20the%20New%20Development%20Bank.pdf>

<sup>35</sup> <http://ndb.int/NDB-Successfully-Issued-First-RMB-denominated-Green-Financial-Bond.php#parentHorizontalTab2>

<sup>36</sup> <http://ndb.int/BRICS-Bank-plans-to-place-bonds-in-Russia.php>

<sup>37</sup> <http://ndb.int/BRICS-banktoallocate100mIn-forfinancingsmall-scaleenergyprojectinKarelia.php>

<sup>38</sup> <https://www.iib.int/en/articles/stroitelstvo-ges-v-karelii-pervyi-sovmestnyi-proekt-mib-i-eabr>

3. US\$250mn loan to India's Canara Bank to finance renewable projects.<sup>39</sup> The first tranche of US\$75mn provided "for generating 500 MW additional renewable energy capacity."<sup>40</sup>
4. US\$81mn loan to Chinese Shanghai Lingang Hongbo New Energy Development Company<sup>41</sup> to fund rooftop solar projects.
5. US\$180mn loan to South Africa's Eskom for renewable energy generation and transmission.<sup>42</sup> The objective of the loan is to fund the development of transmission lines to evacuate 670MW generation and transformation of 500MW of renewable energy generation by independent power producers in the country.<sup>43</sup>

Notably, almost all the loans extended by NDB have explicitly been in the "green" space – in line with the stated agenda of the Bank.

## Plans

Going ahead, NDB plans to raise US\$ 2.5-3 billion over the next three years – to expand its loan book to US\$ 4.0-5.0 billion.<sup>44</sup> Given the existing loan book of US\$911mn, it implies that NDB is looking to extend additional loans of US\$ 3.1-4.1 billion over the next 3 years, or US\$ 1.0-1.4 billion, with a mean of US\$1.2Bn per year.

NDB also plans to increase membership over the next couple of years, to increase its relevance in the globalised world.<sup>45</sup>

However, in terms of projects going ahead, there appears to be a shift in NDB's focus from purely "green" projects like renewable energy projects. The projects that NDB has been evaluating include high speed railway line and road construction projects.<sup>46,47</sup>

---

<sup>39</sup> <http://ndb.int/brics-bank-sanctions-rs1666-crore-to-canara-bank-for-energy-projects.php>

<sup>40</sup> <http://www.hindustantimes.com/business/canara-bank-gets-first-loan-from-brics-bank-for-renewable-energy/story-XEoPChUECSfjLpKzkDeO3M.html>

<sup>41</sup> <http://ndb.int/shanghai-solar-project-wins-nations-first-ndb-loan.php>

<sup>42</sup> [http://ndb.int/south-africas-eskom-gets-\\$180-mln-ndb-loan-for-renewable-energy.php](http://ndb.int/south-africas-eskom-gets-$180-mln-ndb-loan-for-renewable-energy.php)

<sup>43</sup> <http://www.ndb.int/eskom-receives-r2.6bn-renewable-energy-boost.php>

<sup>44</sup> <http://www.ndb.int/BRICS-nations-led-New-Development-Bank-to-raise-up-to-3-billion-in-next-3-years.php>

<sup>45</sup> <http://www.ndb.int/BRICS-New-Development-Bank-hopes-to-expand-by-drawing-other-nations-as-members.php>

<sup>46</sup> <http://ndb.int/BRICS-Bank-plans-to-invest-in-construction-of-roads-in-Russia.php>

<sup>47</sup> <http://ndb.int/BRICSBank%20InterestedinMoscow-KazanHighSpeed-Railway-LineProject.php>

# Annexure II

## Blended Finance

As per the UNCTAD “World Investment Report 2014”, there is a resource requirement of US\$4.5 trillion per annum for achieving the sustainable development goals and the public funding including Official Development Assistance (ODA) is not enough for addressing the development agenda. A lot more is to be done to channel the private investments into these development agendas and ‘Blended Finance’ can be a very effective catalyst.

As per the World Economic Forum’s ReDesigning Development Finance Initiative report<sup>48</sup>,

*“Blended Finance refers to ‘the strategic use of development finance and philanthropic funds to mobilize private capital flows to emerging and frontier markets’. For development finance and philanthropic funders, Blended Finance represents an opportunity to drive significant new capital flows into high-impact sectors, while effectively leveraging private sector expertise in identifying and executing development investment strategies.”*

## Examples of Blended Finance and its Impact

Some instances where public funds have been able to catalyse private funds in the form of Blended Finance are:

- The US\$175mn (DKK 1.3 billion) Danish Climate Investment Fund (KIF)<sup>49</sup> which provides risk capital to climate and renewable energy related projects could mobilize private capital from four Danish pension funds. It is expected that the total investment will amount to approx. DKK 7-8 billion i.e. around 4-5 times investment is expected to come from other private investors.
- Africa Health Fund, which works in the healthcare space and got funding from public investors<sup>50</sup> (Bill & Melinda Gates Foundation, International Finance Corporation, Africa Development Bank & DEG) of US\$57mn, could raise additional US\$48mn from other private and public funders.
- GuarantCo is a facility for providing credit guarantees, political risk guarantees, tenor extension guarantees and on-demand guarantees to the lenders which helps in better supply of local currency financing to infrastructure projects. As of December 31, 2013<sup>51</sup>, GuarantCo had catalysed US\$3.3Bn in private capital with private capital flowing to GuarantCo projects at a rate of 16 times its commitment.

---

<sup>48</sup>[http://www3.weforum.org/docs/WEF\\_Blended\\_Finance\\_A\\_Primer\\_Development\\_Finance\\_Philanthropic\\_Funders.pdf](http://www3.weforum.org/docs/WEF_Blended_Finance_A_Primer_Development_Finance_Philanthropic_Funders.pdf)

<sup>49</sup><https://stateofgreen.com/en/profiles/the-danish-climate-investment-fund>

<sup>50</sup><http://www.abraaj.com/news-and-insight/news/africa-health-fund-invests-us25-million-in-kenya-healthcare-group/>

<sup>51</sup>[http://www3.weforum.org/docs/WEF\\_Blended\\_Finance\\_A\\_Primer\\_Development\\_Finance\\_Philanthropic\\_Funders.pdf](http://www3.weforum.org/docs/WEF_Blended_Finance_A_Primer_Development_Finance_Philanthropic_Funders.pdf)

# Institute for Energy Economics and Financial Analysis

The Institute for Energy Economics and Financial Analysis (IEEFA) conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy and to reduce dependence on coal and other non-renewable energy resources. More can be found at [www.ieefa.org](http://www.ieefa.org)

## Jai Sharda

Jai Sharda is a Consultant with IEEFA in India and the managing partner at Equitorials, a financial research firm based in Bengaluru, India. Jai has 8 years of experience as an Equity Research analyst, both on the Buy side and the Sell side, having covered the mid-cap sector in the Indian markets.

## Important Information

This report is for information and educational purposes only. It is for the sole use of its intended recipient. It is intended solely as a discussion piece focused on the topics. Under no circumstance is it to be considered as a financial promotion. It is not an offer to sell or a solicitation to buy any investment even indirectly referred to in this document; nor is it an offer to provide any form of general nor personal investment service.

This report is not meant as a general guide to investing, or as a source of any specific investment recommendation. While the information contained in this report is from sources believed reliable, we do not represent that it is accurate or complete and it should not be relied upon as such. Unless attributed to others, any opinions expressed are our current opinions only.

Certain information presented may have been provided by third parties. The Institute for Energy Economics and Financial Analysis believes that such third-party information is reliable, and has checked public records to verify it where ever possible, but does not guarantee its accuracy, timeliness or completeness; and it is subject to change without notice. If there are considered to be material errors, please advise the authors and a revised version will be published with a correction.