

## Druk Green Power Corporation Limited

Instrument	Amount (In Rs. Crore)	Rating Action (As in November 2016)
Issuer Rating	-	IrrBBB+ (Stable) reaffirmed

ICRA has reaffirmed the Issuer rating of IrrBBB+ (pronounced I R triple B plus)<sup>1</sup> with Stable outlook to Druk Green Power Corporation Limited (DGPC).

The rating reaffirmation takes into account the status of DGPC as a wholly owned Royal Government of Bhutan (RGoB) enterprise, and the support derived from the Government of India (GoI), in terms of funding and off-take of power. DGPC is an extremely strategically important entity to RGoB, with the company meeting the entire domestic power demand, as well as contributing between 34%-38% of RGoB's own revenues through payment of income tax, royalty energy, and dividends. Going forward, DGPC would play a key role in the development of future hydropower assets in Bhutan, and therefore it would continue to maintain its dominant position in the power sector in Bhutan.

*Table 1: Trend in Gross Generation for last 5 years*

Operational Hydro Projects	Design Energy (MU <sup>2</sup> )	Gross Annual Generation (MU)							
		2010	2011	2012	2013	2014	2015	2016 (Jan-Aug)	2015 (Jan-Aug)
Tala - 1020 MW	3886	4727	4588	4405	4914	4675	4822	2844	3177
Chhukha - 336 MW	1822	1870	1774	1745	1907	1798	1867	1137	1195
Basochhu - 64 MW	291	330	322	300	332	306	313	180	185
Kurichhu - 60 MW	388	378	362	361	379	368	379	250	247
<b>Total Capacity - 1480 MW</b>	<b>6387</b>	<b>7305</b>	<b>7047</b>	<b>6811</b>	<b>7531</b>	<b>7147</b>	<b>7382</b>	<b>4412</b>	<b>4805</b>

Source: Company; ICRA Research

DGPC's existing hydro power assets, aggregating to 1480 MW, have shown very healthy generation in the past (consistently achieving the design energy), which has resulted in strong cash generation for the company, given the firm off-take arrangements with the PTC India Limited (PTC) (rated at [ICRA]A1+) for the entire quantum of surplus power. Low cost of debt and also a cost-plus tariff has resulted in strong accruals for the company, and hence the company is comfortably placed for meeting its debt obligations.

The operational assets of the company have a long history of efficient operations; the oldest asset, the 336 MW Chhukha hydropower plant has completed more than 25 years. The company exports roughly 75% of the generated power at export tariff ranging from INR 1.98 – INR 2.25 per unit, which ensures cost competitiveness for the power supplied to India. Additionally, ICRA notes that despite the company's subsidy burden, as mandated by RGoB, on account of a mandatory 15% royalty power, the company's higher actual generation as compared to the design energy, coupled with the increased rates of export tariff viz. domestic tariff, has aided DGPC to achieve better returns than as allowed by the Bhutan Electricity Authority (BEA), and remains a positive. Additionally, efficient operations of the company have resulted in strong balance sheet numbers, with a conservative capital structure and comfortable debt protection metrics. As on December 31, 2015, DGPC's gearing was 0.23 time. Additionally, the interest coverage remained healthy at 16.36 times in CY2015. However, a large dividend payout has led to a moderate ratio of net cash accruals relative to total debt of 28% in CY2015. However, DGPC's healthy profitability from operations, coupled with a favourable liquidity profile [with the company having a cash & liquid investment balance of Ngultrum (Nu.) 431.94 crore as on December 31, 2015] would support the company's debt service capability going forward. The rating also derives comfort from DGPC's healthy customer profile, leading to timely realization of dues, in turn limiting counterparty risks,

<sup>1</sup> For complete rating scale and definitions please refer to ICRA's website [www.icra.in](http://www.icra.in) or other ICRA Rating Publications

<sup>2</sup> MU: million units

and the regulatory clarity with the release tariff order for the 2013-14 to 2015-16<sup>3</sup> period, in which domestic tariff has been revised from Nu. 1.20/unit to Nu. 1.39/unit. DGPC has filed tariff petition to BEA for the 2016-17 to 2018-19 period in which it has sought an upward revision in the domestic tariff to Nu. 1.84/unit. Additionally, DGPC's export tariff rates with PTC are scheduled for renewal between December'16 to January'17, and this is expected to lead to higher accruals going forward. ICRA however notes that with DGPC's tariffs (both export and domestic) not having separate energy and capacity charge components, the company remains exposed to hydrology risks, with revenues and profits being directly proportional to generation.

Bhutan has set a target to add hydropower generation capacity of 10,000 MW by 2020, which is a substantial increase from the current installed domestic capacity of 1,606 MW. At present, hydropower projects aggregating to 3,838 MW are under development at a budgeted cost of Nu. 36,532 crore. A substantial portion of these capacities, estimated at 2,940 MW, is being developed under separate project authorities (under bilateral agreement between Gol and RGoB), which would transfer these assets (along with the liabilities) post two years of commercial operations to DGPC. Thus DGPC does not have to bear any project execution risk, funding risk, or stabilization risk on these capacities. Out of the 6 projects identified to be developed under the bilateral route, the Punatsangchhu-I (1200 MW), Punatsangchhu-II (1020 MW) and Mangdechhu (720 MW) projects are currently under execution, and are expected to be commissioned between 2018-2020. Apart from bilateral projects, Gol would also provide support to hydroelectric projects to be developed by DGPC in a 50-50 JV with Indian PSU's, where the equity contribution would be entirely funded by the Indian PSU and grants from Gol, insulating DGPC from funding risks. Out of the 4 projects identified to be developed under JV's with NHPC Ltd., SJVN Ltd. and THDC India Ltd., execution for the 600 MW Kholongchhu project in a JV with SJVN Ltd. has already started in CY2015.

Table 2: Hydropower capacities under development in Bhutan

Hydropower projects under development	Capacity	Project Cost	Cost/MW
	MW	Nu. Cr.	Nu. Cr.
<b>Projects Under Bilateral Agreement (Out of 7840 MW, 2940 MW under implementation)</b>			
Punatsangchhu-I	1200	12817	10.68
Punatsangchhu-II	1020	9889	9.70
Mangdechhu	720	5666	7.87
<b>Total</b>	<b>2940</b>	<b>28372</b>	<b>9.65</b>
<b>Projects Under JV with Indian PSU (Out of 2120 MW, 600 MW under implementation)</b>			
Kholongchhu <sup>4</sup>	600	5094	8.49
<b>Total</b>	<b>600</b>	<b>5094</b>	<b>8.49</b>
<b>DGPC's Own Projects (Out of 1920 MW, 118 MW under implementation)</b>			
Nikachhu	118	1189	10.08
<b>Total</b>	<b>118</b>	<b>1189</b>	<b>10.08</b>
<b>Total Capacity Under Development</b>	<b>3658</b>	<b>34655</b>	<b>9.47</b>

Source: Company; ICRA Research

Bhutan has set a target to add hydropower generation capacity of 10,000 MW by 2020, which is a substantial increase from the current installed domestic capacity of 1,606 MW. At present, hydropower projects aggregating to 3,658 MW are under development at a budgeted cost of Nu. 34,655 crore. A substantial portion of these capacities, estimated at 2,940 MW, is being developed under separate project authorities (under bilateral agreement between Gol and RGoB), which would transfer these assets (along with the liabilities) post two years of commercial operations to DGPC. Thus DGPC does not have to bear any project execution risk, funding risk, or stabilization risk on these capacities. Out of the 6 projects identified to be developed under the bilateral route, the Punatsangchhu-I (1200 MW), Punatsangchhu-II (1020 MW) and Mangdechhu (720 MW) projects are currently under execution, and are expected to be commissioned between 2018-2020. Apart from

<sup>3</sup> Period from Jul 01-Jun 30

<sup>4</sup> Shareholder's agreement between DGPC and SJVN Ltd. has been signed for the Kholongchhu project, and construction activities have started, with DGPC having started to receive capital grants for its share of equity investments in the project SPV

bilateral projects, Gol would also provide support to hydroelectric projects to be developed by DGPC in a 50-50 JV with Indian PSU's, where the equity contribution would be entirely funded by the Indian PSU and grants from Gol, insulating DGPC from funding risks. Out of the 4 projects identified to be developed under JV's with NHPC Ltd., SJVN Ltd. and THDC India Ltd., execution for the 600 MW Kholongchhu project in a JV with SJVN Ltd. has already started in CY2015.

In addition to the existing 4 operational projects of DGPC, to increase the pace of capacity addition, the company is now looking for development of projects on its own as well as through joint ventures. This includes the recently commissioned 126 MW Dagachhu project, which is the country's first hydropower station which has been developed under the public private partnership (PPP) route in partnership with Tata Power Company Limited (rated at [ICRA]AA (Negative)/ [ICRA]A1+) and National Pension & Provident Fund. ICRA notes that the operationalisation of the Dagachhu project has increased DGPC's turnover and profits at a consolidated level. Moreover, DGPC is looking to develop 5 more projects having additional capacity of 1920 MW through the PPP mode, which includes the 118 MW Nikachhu hydroelectric project, work for which has commenced in CY2015. Given the sizeable implementation pipeline of PPP projects, the company remains exposed to project execution risks in the intervening period. Moreover, going forward, the company will have to raise debt funding, and also finance equity portion from its own internal accruals for these upcoming PPP projects. ICRA notes that the company's current dividend payout policy (90% dividend payout rate to RGoB), has resulted in weak growth in its reserves, which can limit the ability of the company to finance equity portion of DGPC's future PPP projects. With the total cost of these 5 upcoming PPP projects aggregating to Nu. 20,270 crore, and with DGPC's average annual accretion to reserves being ~Nu. 50 crore in the last 5 years, ICRA believes that the company would not be in a position to fund the equity contribution in all the PPP projects from internal resources only, given the high dividend payout ratio at present. ICRA however notes among the upcoming PPP projects, only the Nikachhu project is under development and present, in which DGPC has already infused its entire equity commitment upfront in CY2015. ICRA understands that DGPC will have the financial flexibility to actively pursue the remaining PPP project only after CY2018, when the loan for the Tala project will be repaid in full, freeing up cash flows around Nu. 220 crore, which are currently utilised to meet DGPC's debt service commitments. Moreover, DGPC has strong linkages with RGoB, being a wholly owned Government enterprise, and has consistently received funding support in the form of loans at competitive interest rates. Also, under the bilateral funding arrangements with Government of India, Government of Austria as well as international funding agencies such as Asian Development Bank (ADB), RGoB on-lends funds to DGPC. The rating also derives comfort from the long-term power off-take arrangements (with in-built provisions for a guaranteed tariff with annual escalation and deemed generation) that have been signed with Tata Power Trading Company Limited (TPTCL) for the entire surplus power from the Dagachhu project, and with PTC India Limited for 80% of the surplus power for the upcoming Nikachhu project, in turn leading to limited demand risks for these projects. ICRA however notes that with the Dagachhu project being developed as a pure run-of-the-river project with zero storage capacity, its profitability remains exposed to risks associated with any shortfall in actual generation from scheduled generation, resulting in incidence of deviation settlement/UI charges. In the first year of operation of the Dagachhu plant, TPTCL has been unable to tie-up long term back-to-back power purchase agreement, which coupled with the current restriction on trading Dagachhu power at Indian exchanges, and challenges in power scheduling on day-ahead basis, had led to TPTCL's average realised tariff being lower than guaranteed tariff, in turn resulting in financial losses for TPTCL. ICRA believes that continuation of such losses in future can pose challenges on power offtake in future. The ratings are also tempered by the substantial un-hedged foreign currency exposures of Dagachhu Hydro Power Corporation Limited (DHPC), as well as DGPC, exposing them to forex fluctuation risks.

The rating has also factored in the sovereign credit risks of Bhutan's arising out of its high external debt burden, as well as its large current account deficit. As on March 31, 2016, Bhutan's external debt stood at 116.9% of the gross domestic product (GDP). Moreover, according to the balance of payment estimates for FY 2014-15<sup>5</sup>, the country's current account deficit remained highly skewed at 30.2% of GDP, largely dragged down by the large trade deficit with India. Bhutan's real GDP growth, which declined to 2.1% in FY2013-14 from 7.9% in FY2011-12 on account of the slowdown driven by a Rupee shortage, had recovered to 5.5% in FY2014-15. The Royal Monetary Authority (RMA) has guided for a further improvement in Bhutan's real GDP growth rate to 7.0% in FY2015-16, driven by buoyancy in the construction, mining, and services sectors. However, ICRA notes that given a) Bhutan's large trade deficit with India, b) the country's large share of external reserves denominated in INR, and c) the substantial circulation of Indian Rupee currency notes in Bhutan, the Government of India's recent move on demonetisation of high value currency notes (of INR 500 and INR 1,000

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<sup>5</sup> Period from Jul 01-Jun 30



denominations) can potentially throttle Bhutan's economic activity in the near term, emanating out of an interim liquidity imbalance, which increases the risks of a moderation in GDP growth in FY2016-17. In the medium term, timely commissioning of Bhutan's ongoing hydropower projects accumulating to 3,058 MW remains extremely crucial for a greater degree of macro-economic stability, as well as an improvement in the country's credit metrics, and fiscal position.

### **Company Profile**

Druk Green Power Corporation Limited (DGPC) is a wholly owned enterprise of the Royal Government of Bhutan. The company was incorporated in January 2008 through amalgamation of Chhukha, Kurichhu and Basochhu hydropower projects. The Tala hydropower project was subsequently taken over in April 2009. The current operational capacity of the company stands at 1,480 MW. DGPC exports almost 75% of the generated power to PTC India Limited through firm power purchase agreements. DGPC has also recently commissioned the 126 MW Dagachhu hydropower project in an SPV with Tata Power Trading Company Limited (26% stake) and National Pension and Provident Fund (15% stake). Moreover, DGPC has formed a 100% subsidiary, Tangsibji Hydro Energy Limited, for the development of the 118 MW Nikachhu hydroelectric project, which is slated for commissioning in April 2020.

### **Recent Results**

DGPC reported a net profit of Nu. 517.30 crore in CY2015 on the back of an operating income of Nu. 1406.66 crore, as against a net profit of Nu. 506.87 crore on the back of an operating income of Nu. 1365.68 crore in CY2014.

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