

## ANNEXURE 'A' TO BOARD'S REPORT

### DIVIDEND DISTRIBUTION POLICY

This Policy is called "ACC Limited – Dividend Distribution Policy" (hereinafter referred to as "the Policy"). The Policy is framed pursuant to Regulation 43A of Securities & Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015. The Policy has come into effect from December 17, 2016 as per approval granted by the Board.

The Policy lays down the broad criteria which the Company would take into consideration for the purpose of ascertaining the amount of dividend to be declared keeping in mind the need to maintain a balance between the payout ratio and retained earnings, in order to address future needs of the Company. The policy serves as a guideline for the Board of Directors and the decision of the Board of Directors with respect to the amount of dividend declared for any given period will be final and shall not be open to challenge by any person on the basis of the Policy.

Dividend would continue to be declared on per share basis on the Ordinary Equity Shares of the Company having face value of ₹ 10 each. The Company currently has no other class of shares. Dividend other than interim dividend shall be declared at the annual general meeting of the shareholders based on the recommendation of the Board of Directors. The Board of Directors has the authority to declare interim dividend.

Subject to the provisions of the applicable law, the Company's dividend payout will be determined based on available financial resources, growth/investment requirements and fair shareholder return. The Company will broadly take into consideration the following financial parameters and/or internal and external factors to determine whether or not to declare dividend or to determine the quantum of dividend to be declared.

#### INTERNAL FACTORS

- Profits earned during the financial year and the retained profits of the previous years in accordance with the provisions of Section 123 and other applicable provisions of the Companies Act, 2013 read with rules framed thereunder;
- Cash flow position of the Company and the debt : equity ratio;

- Projections with regard to the performance of the Company;
- Fund requirement to finance Capital Expenditure;
- Fund requirement to finance any organic/ inorganic growth opportunities or to finance working capital needs of the Company;
- Opportunities for investment of the funds of the Company to capture future growth;
- Dividend payout history.

#### EXTERNAL FACTORS

- Business cycles and long term/ short term industry outlook;
- Cost of external financing;
- Changes in the Government policies, rate of inflation and taxes structure etc.;
- Quantum of dividend payout by other comparable concerns etc.

The Company may recommend additional special dividend in special circumstances.

In the event of a loss or inadequacy of profits in a given year, Company may, taking into consideration the shareholder expectations, past dividend payout history etc. declare payment of dividend out of its reserves as may be permitted by the law.

Likewise, in the event of challenging circumstances such as adverse economic cycles and industry projections, the performance of the Company in the coming years, pressure on cash flow on account of various factors such as higher working capital requirements etc., the Company may, decide not to declare a dividend even when in a given year, the Company had generated profits.

In case it is proposed not to declare dividend during any financial year, the grounds thereof and the information on the manner in which the retained profits of the Company, if any, are being utilized shall be disclosed to the Members in the Board's Report forming part of the Annual Report of the Company for the given financial year.

The Chief Executive Officer & Managing Director and the Chief Financial Officer, considering various internal and external factors and the overall performance of

the Company, shall jointly make a recommendation to the Board of Directors with regard to whether or not to declare a dividend and in case a dividend is recommended, the quantum of dividend to be declared

The retained earnings of the Company may be used in any of the following ways:

- Capital expenditure, and for the purpose of any organic and/ or inorganic growth,
- Declaration of dividend,

- Issue of Bonus shares or buy back of shares,
- Other permissible usage as per the Companies Act, 2013.

The policy may be modified as may, in the opinion of the Board of Directors be deemed necessary.

The Policy will be available on the Company's website: [www.acclimited.com](http://www.acclimited.com) and will also be disclosed in the Company's Annual Report.

## ANNEXURE 'B' TO BOARD'S REPORT

### CSR POLICY STATEMENT

Our vision is to be one of the most respected companies in India, delivering superior and sustainable value to all our customers, business partners, shareholders, employees, and host communities.

Our CSR initiatives focus on the holistic development of our host communities while creating social, environmental and economic value to the society.

To pursue these objectives we will continue to:

- Uphold and promote the principles of inclusive growth and equitable development.
- Devise and implement Community Development Plans based on the needs and priorities of our host communities and measure the effectiveness of such development programmes.
- Work actively in the areas of Livelihood advancement, Enhancing employability and Income Generation, Improving Quality and reach of Education, Promoting Health and Sanitation, conserving the Environment and supporting local Sports, Arts and Culture.
- Collaborate with like-minded bodies such as Governments, Civil Society Organisations and Academic Institutions in pursuit of our Goals.
- Interact regularly with stakeholders, review and publicly report our CSR initiatives.

## ANNEXURE 'B' TO BOARD'S REPORT

### ANNUAL REPORT ON CORPORATE SOCIAL RESPONSIBILITY (CSR) ACTIVITIES

1. **A brief outline of the company's CSR policy, including overview of projects or programs proposed to be undertaken and a reference to the web-link to the CSR policy and projects or programs.**

Please refer to the CSR Policy statement set out at page 81 of this Annual Report.

Web link : <http://www.acclimited.com/source/new/csr/CSR-Policy-finalised-after-28-Nov-2016-Board-CSR-Committee-meeting.pdf>

2. **The Composition of the CSR Committee:**

Mr Shailesh Haribhakti, Chairman  
(Independent Director)

Ms Falguni Nayar, Member  
(Independent Director)

Mr Farrokh K Kavarana, Member  
(Independent Director)

Mr Neeraj Akhoury, Member  
(MD&CEO)

3. **Average net profit of the Company for last three financial years.**

Years	2017	2016	2015
Net Profit (₹ in Crore)	1258.72	862.76	818.93

Average net profit of the company for last three financial years is ₹ 980.14 Crore.

4. **Prescribed CSR Expenditure (two percent of the amount as in item 3 above)**

₹ 19.60 Crore

5. **Details of CSR spends for the financial year.**

a) Total amount to be spent for the financial year ended December 31, 2018:

₹ 19.60 Crore

b) Amount unspent, if any:

Not Applicable

c) **Manner in which the amount spent during the financial year is detailed below.**

Sr.No.	CSR Project/Activities	Sector	Locations - Districts (States)	Amount Outlay (Budget) Project or Program wise (₹ in Crore)	Amount Spent on the project or programs (₹ in Crore)	Cumulative Expenditure upto reporting period (₹ in Crore)	Amount Spent: Direct or through implementation agency (₹ in Crore)
					Sub - Heads: 1. Direct Expenditure on Projects or parishad 2. Overheads*		

1.	ACC DISHA	Youth Employability (Schedule VII – (ii) Promotion of education including special education and employment enhancing vocation skills especially among children, women, elderly and the differently abled and livelihood enhancement projects)	Bilaspur (Himachal Pradesh), Katni (Madhya Pradesh), Bundi (Rajasthan), Gauriganj (Uttarpradesh), Bargarh (Odisha), West Singhbhum (Jharkhand), Purulia (West Bengal), Durg (Chhatisgarh), Dhanbad (Jharkhand), Chandrapur (Maharashtra), Yavatmal (Maharashtra), Bellary (Karnataka), Chikkaballapur (Karnataka), Gulbarga(Karnataka), Coimbatore (Tamil Nadu), Erode (Tamil Nadu) and Kerala	5	3.93	3.93	3.93
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Sr.No.	CSR Project/Activities	Sector	Locations - Districts (States)	Amount Outlay (Budget) Project or Program wise (₹ in Crore)	Amount Spent on the project or programs (₹ in Crore) Sub - Heads: 1. Direct Expenditure on Projects or parishad 2. Overheads*	Cumulative Expenditure upto reporting period (₹ in Crore)	Amount Spent: Direct or through implementation agency (₹ in Crore)
2.	ACC- LIESA	Sustainable Agriculture (Schedule VII – (ii) Promotion of education including special education and employment enhancing vocation skills especially among children, women, elderly and the differently abled and livelihood enhancement projects)	Bilaspur (Himachal Pradesh), Katni (Madhya Pradesh), Bundi (Rajasthan), Gauriganj (Uttarpradesh), Bargarh (Odisha), West Singhbhum (Jharkhand), Purulia (West Bengal), Durg (Chhatisgarh), Dhanbad (Jharkhand), Chandrapur (Maharashtra), Yavatmal (Maharashtra), Gulbarga (Karnataka), Bellary (Karnataka), Chikkaballarpur (Karnataka) and Coimbatore (Tamil Nadu)	3	1.77	1.77	1.77
3.	ACC - Swavlamban	Women Empowerment (Schedule VII – (iii) Promoting gender, equality, empowering women, setting up homes and hostels for women and orphans; setting up old age homes, day care centres and such other facilities for senior citizens and measures for reducing inequalities faced by socially and economically backward groups)	Bilaspur (Himachal Pradesh), Katni (Madhya Pradesh), Bundi (Rajasthan), Gauriganj (Uttarpradesh), Bargarh (Odisha), West Singhbhum (Jharkhand), Purulia (West Bengal), Durg (Chhatisgarh), Dhanbad (Jharkhand), Chandrapur (Maharashtra), Yavatmal (Maharashtra), Gulbarga (Karnataka), Bellary (Karnataka), Chikkaballarpur (Karnataka), and Coimbatore (Tamil Nadu)	3	2.09	2.09	2.09

Sr.No.	CSR Project/Activities	Sector	Locations - Districts (States)	Amount Outlay (Budget) Project or Program wise (₹ in Crore)	Amount Spent on the project or programs (₹ in Crore) Sub - Heads: 1. Direct Expenditure on Projects or parishad 2. Overheads*	Cumulative Expenditure upto reporting period (₹ in Crore)	Amount Spent: Direct or through implementation agency (₹ in Crore)
4.	ACC Vidya Utkarsh	Quality Education (Schedule VII – (ii) Promotion of education including special education and employment enhancing vocation skills especially among children, women, elderly and the differently abled and livelihood enhancement projects)	Bilaspur (Himachal Pradesh), Katni (Madhya Pradesh), Bundi (Rajasthan), Gauriganj (Uttarpradesh), Bargarh (Odisha), West Singhbhum (Jharkhand), Purulia (West Bengal), Durg (Chhatisgarh), Dhanbad (Jharkhand), Chandrapur (Maharashtra), Yavatmal (Maharashtra), Gulbarga (Karnataka), Bellary (Karnataka), Chikkaballarpur (Karnataka), Shrawasti (Uttar Pradesh), Shahazanhapur (Uttar Pradesh), Jaunpur (Uttar Pradesh), Mirzapur (Uttar Pradesh), Mewat (Haryana), Sirmaur (Himachal Pradesh), Sheopur (Madhya Pradesh), Rudraprayag (Uttarakhand), Alwar (Rajasthan), and Coimbatore (Tamil Nadu)	4	5.46	5.46	5.46
5.	ACC Vidya Saarathi	Scholarship and support (Schedule VII – (ii) Promotion of education including special education and employment enhancing vocation skills especially among children, women, elderly and the differently abled and livelihood enhancement projects)	Bilaspur (Himachal Pradesh), Katni (Madhya Pradesh), Bundi (Rajasthan), Gauriganj (Uttarpradesh), Bargarh (Odisha), West Singhbhum (Jharkhand), Purulia (West Bengal), Durg (Chhatisgarh), Dhanbad (Jharkhand), Chandrapur (Maharashtra), Yavatmal (Maharashtra), Gulbarga (Karnataka), Bellary (Karnataka), Chikkaballarpur (Karnataka), and Coimbatore (Tamil Nadu)	2	0.73	0.73	0.73

Sr.No.	CSR Project/Activities	Sector	Locations - Districts (States)	Amount Outlay (Budget) Project or Program wise (₹ in Crore)	Amount Spent on the project or programs (₹ in Crore) Sub - Heads: 1. Direct Expenditure on Projects or parishad 2. Overheads*	Cumulative Expenditure upto reporting period (₹ in Crore)	Amount Spent: Direct or through implementation agency (₹ in Crore)
6.	ACC- Arogyam	Health (Schedule VII – (i) Eradicating hunger poverty and malnutrition, promoting preventive health care and sanitation and making available safe drinking water)	Bilaspur (Himachal Pradesh), Katni (Madhya Pradesh), Bundi (Rajasthan), Gauriganj (Uttarpradesh), Bargarh (Odisha), West Singhbhum (Jharkhand), Purulia (West Bengal), Durg (Chhatisgarh), Dhanbad (Jharkhand), Chandrapur (Maharashtra), Yavatmal (Maharashtra), Gulbarga (Karnataka), Bellary (Karnataka), Chikkaballarpur (Karnataka), and Coimbatore (Tamil Nadu)	3	2.00	2.00	2.00
7.	ACC - Sampoorn Swachhata	Sanitation (Schedule VII – (i) Eradicating hunger poverty and malnutrition, promoting, health care including preventive health care and sanitation and making available safe drinking water)	Bilaspur (Himachal Pradesh), Katni (Madhya Pradesh), Bundi (Rajasthan), Gauriganj (Uttarpradesh), Bargarh (Odisha), West Singhbhum (Jharkhand), Purulia (West Bengal), Durg (Chhatisgarh), Dhanbad (Jharkhand), Chandrapur (Maharashtra), Yavatmal (Maharashtra), Gulbarga (Karnataka), Bellary (Karnataka), Chikkaballarpur (Karnataka), Coimbatore (Tamil Nadu)	3	2.28	2.28	2.28

Sr.No.	CSR Project/Activities	Sector	Locations - Districts (States)	Amount Outlay (Budget) Project or Program wise (₹ in Crore)	Amount Spent on the project or programs (₹ in Crore) Sub - Heads: 1. Direct Expenditure on Projects or parishad 2. Overheads*	Cumulative Expenditure upto reporting period (₹ in Crore)	Amount Spent: Direct or through implementation agency (₹ in Crore)
8.	ACC Sanrakshit Paryavaran	Conservation of Environment (Schedule VII – (iv) Ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agro forestry, conservation of natural resources and maintaining quality of soil, air and water;)	Bilaspur (Himachal Pradesh), Katni (Madhya Pradesh), Bundi (Rajasthan), Gauriganj (Uttarpradesh), Bargarh (Odisha), West Singhbhum (Jharkhand), Purulia (West Bengal), Durg (Chhatisgarh), Dhanbad (Jharkhand), Chandrapur (Maharashtra), Yavatmal (Maharashtra), Gulbarga (Karnataka), Bellary (Karnataka), Chikkaballapur (Karnataka), Coimbatore (Tamil Nadu) Aurangabad (Maharashtra) and Beed (Maharashtra)	1	1.17	1.17	1.17
9.	ACC -Drona	Promoting Local, Arts and Culture (Schedule VII – (vii) Training to promote rural sports, nationally recognized sports, Paralympic sports and Olympic sports) (v) Protection of national heritage, art and culture including restoration of buildings and sites of historical importance and works of art; setting up public libraries; promotion and development of traditional arts and handicrafts;	Bilaspur (Himachal Pradesh), Katni (Madhya Pradesh), Bundi (Rajasthan), Gauriganj (Uttarpradesh), Bargarh (Odisha), West Singhbhum (Jharkhand), Purulia (West Bengal), Durg (Chhatisgarh), Dhanbad (Jharkhand), Chandrapur (Maharashtra), Yavatmal (Maharashtra), Gulbarga (Karnataka), Bellary (Karnataka), Chikkaballapur (Karnataka), and Coimbatore (Tamil Nadu)	1	1.02	1.02	1.02
<b>TOTAL</b>				<b>25.00</b>	<b>20.45</b>	<b>20.45</b>	<b>20.45</b>

\* Company has spent on salary/administrative overheads in addition to ₹ 20.45 Crore.



**Details of some of the implementing agencies:**

1. ACC Trust, 2. Agranee Jan Kalyan Anusthan, 3. Hand in Hand, Jamul, 4. Amhi Amchya Arogyasathi, 5. Patang, Sambalpur, Odisha, 6. Head Held High, Bangalore 7. ACC MAVIM Loksanchalit Sadhan Kendra - CMRC- Ghugus, 8. Imayam Social welfare Association, 9. American India Foundation, New Delhi 10. Siruthuli, Tamil Nadu 11. Dilasa Janvikas Pratishthan, Aurangabad, 12. Forum for Rural Development (FORD), 13. Shanti Ashram, Tamil Nadu 14. HARITIKA, 15. Himachal Pradesh Voluntary Health Association (HPVHA), Shimla, 16. Ranthambhor Seva Sansthan, Jaipur 17. IIMPACT, New Delhi, 18. PHIA Foundation, Ranchi, Jharkhand 19. Jan Sevak Samiti, Bhilai, 20. Jan Mangal Sansthan 21. Loka kalyan Parishad, 22. Mahashakti Foundation, 23. Mahatma Gandhi Integrated development and Education Institute, Bandikui, Rajasthan, 24. Naad Gunjan Kala Parishad, 25. Zivanta Analytics, Kolkata 26. Development Alternative, New Delhi 27. HelpAge India, New Delhi, 28. Sarva Seva Samiti Sanstha, Bargarh 29. SATTVA Media and consulting Pvt. Ltd, Bangalore, 30. SEED CSR, New Delhi, 31. Self reliant initiatives through joint action (SRIJAN), 32. SERDS, Kadirannagari Palli, Bagepalli Tal, 33. Loka Kalyan Parishad, 34. Sanskar, 35. Association for Sarva Seva farm 36. Manav Vikas Sansthan, 37. Seetha Skill Centre, 38. UDYOGINI, 39. AHEAD Trust, 40. Sadbhawana Sewa Evam Shiksha Sansthan, Jamul, 41. GPR Strategies and Solutions.

**6. In case the company has failed to spend the two percent of the average net profit of the last three financial years or any part thereof, the company shall provide the reasons for not spending the amount in its board report.**

Not Applicable

**7. A responsibility statement of the CSR Committee that the implementation and monitoring of CSR Policy is in compliance with CSR objective and Policy of the company.**

ACC CSR projects were designed, implemented and periodically monitored based on need assessment reports and CSR Policy of the Company, which in turn is based on and implemented as per statutory requirements.

SHAILESH HARIBHAKTI  
Chairman, CSR Committee

NEERAJ AKHOURY  
Managing Director & Chief Executive Officer

Date: February 5, 2019

## ANNEXURE 'C' TO BOARD'S REPORT

### FORM NO. AOC-2

January to December - 2018

#### Particulars of contracts/arrangements made with related parties

(Pursuant to clause (h) of sub-section (3) of section 134 of the Act and Rule 8(2) of the Companies (Accounts) Rules, 2014)

This Form pertains to the disclosure of particulars of contracts/arrangements entered into by the Company with related parties referred to in sub-section (1) of section 188 of the Companies Act, 2013 including certain arm's length transactions under third proviso thereto.

#### Details of contracts or arrangements or transactions not at arm's length basis

No contracts or arrangements or transactions were entered into during the year ended December 31, 2018, which are not at arm's length basis.

#### Details of material contracts or arrangement or transactions at arm's length basis

The details of material contracts or arrangements or transactions at arm's length basis for the year ended December 31, 2018 are as follows;

Name of the related party	Nature of Relationship	Duration of Contract	Salient Terms	Amount (in ₹ Crore.)
<b>Nature of Contract</b>				
<b>Purchase of goods</b>	Holding Company			
Ambuja Cements Limited	Holding Company	June 1, 2018 - December 31, 2018	Based on Transfer Pricing Guidelines	12.1
				<b>12.1</b>
<b>Sale of Goods</b>				
Ambuja Cements Limited	Holding Company	June 1, 2018 - December 31, 2018	Based on Transfer Pricing Guidelines	26.2
				<b>26.2</b>
<b>Use of Technology and Knowhow</b>				
Holcim Technology Ltd	Fellow Subsidiary	January 1, 2018 - December 31, 2018	Based on Transfer Pricing Guidelines	144.5
				<b>144.5</b>

#### Notes:

1. On April 16, 2018, the Shareholders have approved the Master Supply Agreement between the Company and Ambuja Cements Ltd for sale of purchase of cement, clinker, raw materials and spare parts
2. On June 13, 2018 the Shareholders have approved the execution of the Technology and Knowhow Agreement with Holcim Technology Ltd for 3 years from January 1, 2018

**ANNEXURE 'D' TO BOARD'S REPORT****FORM NO. MR-3****SECRETARIAL AUDIT REPORT****FOR THE YEAR ENDED 31<sup>ST</sup> DECEMBER, 2018****[Pursuant to Section 204(1) of the Companies Act, 2013 and Rule No.9 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014]**

To,  
The Members,  
ACC Limited

We have conducted the secretarial audit of the compliance of applicable statutory provisions and the adherence to good corporate practices by ACC Limited (hereinafter called the Company). Secretarial Audit was conducted in a manner that provided us a reasonable basis for evaluating the corporate conduct/ statutory compliances and expressing our opinion thereon.

Based on our verification of Company's books, papers, minute books, forms and returns filed and other records maintained by the company and also the information provided by the Company, its officers, agents and authorized representatives during the conduct of secretarial audit, we hereby report that in our opinion, the Company has, during the audit period covering the financial year ended 31<sup>st</sup> December, 2018, complied with the statutory provisions listed hereunder and also that the Company has proper Board-processes and compliance mechanism in place to the extent, in the manner and subject to the reporting made hereinafter.

We have examined the books, papers, minute books, forms and returns filed and other records maintained by the Company for the year ended 31<sup>st</sup> December, 2018 according to the provisions of:

- (1) The Companies Act, 2013 (the Act) and the rules made there under;
- (2) The Securities Contracts (Regulation) Act, 1956 ('SCRA') and the rules made there under;
- (3) The Depositories Act, 1996 and the Regulations and Bye-laws framed there under;
- (4) Foreign Exchange Management Act, 1999 and the rules and regulations made there under;

5) The following Regulations and Guidelines prescribed under the Securities and Exchange Board of India Act, 1992 ('SEBI Act'):-

- (a) The Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011 as amended from time to time;
- (b) The Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015 as amended from time to time;

We have also examined compliance with the applicable clauses of the following:

- (i) Secretarial Standards issued by The Institute of Company Secretaries of India (SS – 1 & SS – 2).
- (ii) The Securities and Exchange Board of India (Listing Obligation and Disclosure Requirements) Regulations, 2015 as amended.

**We further report that**

The Board of Directors of the Company is duly constituted with a proper balance of Executive Director, Non-Executive Directors and Independent Directors. No change in the composition of the Board of Directors have taken place during the period under review..

Adequate notice is given to all directors before scheduling the Board Meetings, agenda and detailed notes on agenda were sent at least seven days in advance and a system exists for seeking and obtaining further information and clarifications on the agenda items before the meeting and for enabling meaningful participation at the meeting.

During the period, all the decisions in the Board Meetings were carried unanimously.

We have relied on the representation made by the Company, its Officers and Reports of the Statutory Auditors for the systems and mechanism framed by the Company for compliances under other Acts, Laws and Regulations applicable to the Company.

**We further report that** there are adequate systems and processes in the Company which are commensurate with the size and operations of the Company to monitor and ensure compliance with applicable laws, rules, regulations and guidelines.

During the period under review the Company has complied with the provisions of the Act, Rules, Regulations, Guidelines, Standards, etc. as mentioned above.

**We further report that** during the audit period there were no specific events/actions which have a major bearing on the Company's affairs.

For Pramod S. Shah & Associates  
(Practising Company Secretaries)

Pramod Shah-Partner  
Pramod S. Shah & Associates  
FCS No.: 334  
C O P No.: 3804

Date: 28/01/2019  
Place: Mumbai

## ANNEXURE 'E' TO BOARD'S REPORT

### CONSERVATION OF ENERGY, TECHNOLOGY ABSORPTION AND FOREIGN EXCHANGE EARNINGS & OUTGO

#### A1: POWER COST OPTIMISATION

During the year efforts were made to reduce the impact of increasing electrical energy cost by partly replacing grid power through consumption of Open Access (OA) power from comparatively cheaper sources. However, abrupt changes in additional charges for OA power through Exchange made it unviable most of the time. In spite of this, enhanced intake of Solar power through Power Purchase Agreements (PPA) at Thondebhavi increased the Open Access consumption to 81.3 % from 73%. At Kudithini, the OA power reduced to 83.5 % from 87%, in spite of enhanced intake of Solar Power. At Gagal the OA quantum reduced to 6.44 % from 32%. In addition, consumption of OA power was started at Wadi and Madukkarai with 10% & 5% respectively of the grid power consumed. The total saving was ₹ 16.8 Crore in power cost YOY basis.

#### A2 : RENEWABLE POWER OBLIGATION

Your Company is trying to reduce the cash outflow for purchase of RECs against Renewable Power Obligation. The captive wind power generation sources contributed considerably in this front. Besides this, the Company has sourced 44.49 million units collectively at Thondebhavi and Kudithini to fulfill the Solar RPO and excess units are being used to fulfill Non Solar RPO. This resulted an additional saving of approx ₹ 5 Crore.

#### A3: CONSERVATION OF ENERGY

Energy conservation and efficiency measures were undertaken in various areas of the cement manufacturing and Captive Power Plants (CPPs), through Operational and Capex measures. A few highlights are as under:

- Dynamic reactive power compensation to improve grid power factor
- Focus on Productivity Rate Index (PRI) improvement through Computational Fluid Dynamics (CFD) studies.
- Energy audits of all integrated plants
- Installation of High level controllers
- Installation of medium voltage drives for process fans and Boiler Feed Pumps
- Replacement of conventional lights with LED across the plants

Jamul, Wadi and Kymore plants were adjudged as Excellent Energy Efficient units by Confederation of Indian Industries (CII) during the year.

#### Plant wise briefs are as under

- Jamul – Installation of dynamic reactive power compensation system to improve the power factor; Installation of high level control system for kiln control;
- Gagal – Installation of high level controller for kiln control; Improving coal conveying phase density by controlling the speed; Compressed air optimization and daily tracking of compressed air power consumption; Design and implementation of 'Meal Curtain' through CFD Study for improvement of Productivity Rate Index, as well as coating reduction at Kiln inlet;
- Chanda – Installation of High level controller for kiln control; Installation of Online Condenser Cleaning system in CPP;
- Wadi – Condenser tube replacement of TG 2&5. Improvement of Calcliner string fan efficiency by replacing with high efficiency fan & drive; Modification in Cooler duct at Wadi 2 through CFD Study to reduce dust accumulation in cooler riser duct and improve kiln stability; Selection and fixing AFR feeding point through CFD study for optimum combustion and enhancement of AFR usage; Reduction in clinker cooler Temperature by replacement of cooler fan and motor (FA 4 & 5) and Replacement of impeller of Cooler fan FA 6 & FA 7; Replacement of Cooler 3<sup>rd</sup> compartment plates; Reduction of losses by replacing GRR with SPRS in Raw Mill #1 fan; Reduction in primary air in burner from 9.9 % to 6.7% by replacing the existing fan with high pressure and low volume blower; Replacement of Separator cone of Cement mill;
- Tikaria – Conversion of Cement Mill # 1 to mono-chamber from double chamber to increase the mill output; Replacement of CM# 3 Recirculating fan cone and inlet damper; Installation of vacuum pump in CPP; Installation of Medium Voltage Variable Frequency Drive (MVVFD) for Boiler Feed pump; Replacement of inefficient reciprocating compressors (Flyash Handling as well as Instrument Air) with screw compressor along with VFD in CPP;
- Kymore – Installation of MV drives for process fans of bag house of line-1 and Preheater fan and Atox mill fan of line-2;

- Kudithini – Installation of automatic shut off valve for the compressed air line to avoid leakages; Interlocking of compressors to avoid idle running;
- Chaibasa – Installation of vacuum pump in place of steam ejector in CPP; Installation of VFD for Boiler feed pump in CPP to reduce Auxiliary power consumption; Installation of the online condenser cleaning system for the CPP;
- Sindri – Optimization of compressed air usage which resulted in avoiding operation of one compressor; PRI improvement of mills by modification & grinding media pattern changes; Installation of capacitor bank for power factor improvement;
- Bargarh –PC fuel firing and Transport Line was modified after CFD study for reduction of Specific Thermal energy; Preheater - top cyclone & Stage III cyclone modification through CFD study to improve cyclone efficiency; Improved fan efficiencies for Cement mill separator fan, VRM Bag house fan, PH Fan, Kiln bag house fan and Sepax fan by installing vortex breaker at fan inlet based on CFD Study;
- Madukkarai - Selection and fixing AFR feeding point for better AFR material distribution through CFD study to achieve optimum combustion and enhancement of AFR usage;
- Lakheri - Improved VRM fan efficiency by installing vortex breaker at fan inlet based on CFD Study.

#### **Green Power**

- ACC Renewable Energy Portfolio consists of 19 MW in the form of Wind Farms across 3 states and has generated approx 34.74 Million Units of green power. (Rajasthan - 12.44 Million Units, Tamil Nadu – 18.67 Million, Maharashtra – 3.62 Million units);
- These units helped ACC to meet the Renewable Purchase Obligation (Non Solar) for Madukkarai Plant (Tamil Nadu) & Lakheri Plant (Rajasthan) fully, besides getting power at a very cheaper cost;
- In Maharashtra, ACC Thane complex and Bulk Cement Corporation of India, Kalamboli are operating mainly on renewable energy with negligible cost through the ACC wind turbines at Satara, Maharashtra. This resulted in power cost avoidance of ₹ 2.5 Crore;
- The Renewable Power Obligations of other plants are met by purchasing Renewable Energy Certificates (Solar & Non Solar).

#### **Additional Proposals being implemented for further conservation of energy**

- Design of ‘Meal Curtain’ through CFD Study for improvement of PRI as well as coating reduction at kiln inlet is planned for Gagah-2, Lakheri and Wadi-2;
- Selection of AFR feeding point through CFD for optimum combustion and enhancement of AFR usage is planned for Kiln-2 of Kymore;
- Installation of High level controller is planned for kiln control & mill control;
- Upgradation of existing fans, pumps & compressors with high efficient ones;
- Installation of variable speed drives for process fans for clinkering as well as grinding section, Boiler Feed Pump for Captive Power Plant;
- On Line Condenser cleaning system for CPP at Bargarh, Kymore and Chanda;
- Upgradation of Energy Management System for Kymore and Tikaria.

#### **Impact of the above measures for reduction of energy consumption and consequent impact on cost of production**

The measures stated in points (a) above would further improve the thermal and electrical energy efficiency of the Plants.

#### **The capital investment on energy conservation equipments**

Your Company invested ₹ ~ 48.8 Crore on productivity / efficiency improvement, besides implementation of low cost measures to reduce energy consumption

#### **(B) TECHNOLOGY ABSORPTION**

##### **Research & Development (R&D)**

#### **1. Specific areas in which R & D is carried out by the Company**

- a) Conservation of resources through maximization of use of low-grade limestone for cement manufacture, improving quality of blended cement through innovative processing utilizing industrial by-products for improved quality Performance of ACC Plants;
- b) Maximization of use of Petcoke as a fuel and optimizing a lowest cost Fuel Mix plant wise;
- c) Improving the grinding efficiency of Petcoke and Coal through in-house patented process;

- d) Characterization of Industrial wastes and looking into possibilities environmentally friendly co-processing of wastes in cement manufacture leading to thermal substitution and conservation of natural resources;
- e) Recycling of wastes and research for efficient use of scarce materials;
- f) Development of new products or developing new methods of evaluation and Characterization analysis;
- g) Development and use of Cement Grinding aid and accelerators for PPC, PSC and Composite Cement for improved performance in Concrete and achieving higher % Fly ash in PPC, higher % Slag in PSC and higher % Fly ash and % Slag in Composite cement;
- h) Productivity research for increased efficiency in use of resources development of Application Oriented Cements with decreased CO<sub>2</sub> emissions;
- i) Development of Cements tailored for specific market clusters and application segments;
- j) Development and manufacture of Composite Cement with improved concrete performance;
- k) Development of one of its kind Cement in India for reducing water seepage;
- l) Development waterproofing of Internal Compound as a part of new initiative;
- m) Development of cement based Niche products and Dry Mix Mortars;
- n) Quality Benchmarking exercise for different market clusters of ACC products;
- o) Monitoring in all the plants, the Cement performance in Concrete through application oriented testing;
- p) Quality audit from mining to packing as well as labs to ensure proper sampling, ensuring reproducibility and repeatability of evaluation at each stage of manufacturing process, with automation and availability of analysis data through Laboratory Information Management System (LIMS).
- b) Effective use of marginal quality raw materials and fuels with improved clinker quality;
- c) Launch of special high performance products like F2R, Concrete+, ACC Gold for specific Market segments / Market climatic conditions;
- d) Launch of LeakBlock waterproofing compound;
- e) Increased absorption of blending materials like fly ash and slags in blended cements;
- f) Effective replacement of the costlier natural Gypsum by cheaper by products without affecting the quality of cement targeting reduced gypsum cost per tonne of Cement;
- g) Fuel efficiency;
- h) Reduction in Sp.power consumption for grinding;
- i) Effective use of SPC at each stage of Cement Manufacture for improving consistency of Operations and consistency in Product Quality.

### 3. Future plan of action

- a) Focus on development of products aimed at enhancing use of cement in various applications and development of Application Oriented Cement based cementitious material;
- b) Exploratory research works on the above specified areas;
- c) Use of waste / by-products in cement manufacture as alternative materials;
- d) Improve product quality particularly with respect to long term durability and reduction in cost of manufacture.

### 4. Expenditure on R & D

	₹ Crore
R & D Expenditure (₹ Crore)	6.15
Total R&D expenditure as percentage of Revenue from operation (%)	0.04

### 5. Foreign Exchange Earnings & Outgo

	₹ Crore
Foreign exchange earned	-
Foreign exchange used	147.52

## 2. Benefits derived as result of above R & D

- a) Maintain a lead position in all the market clusters of the country;

## ANNEXURE 'F' TO BOARD'S REPORT

### INFORMATION PURSUANT TO SECTION 197(12) READ WITH RULE 5 OF THE COMPANIES (APPOINTMENT AND REMUNERATION OF MANAGERIAL PERSONNEL) RULES, 2014

- 1) Ratio of Remuneration of each Director/KMP to the median remuneration of all the employees of the Company for the year 2018

Median Remuneration of all the employees of the Company (₹ in Lakhs)	4.88
Percentage increase in Median Remuneration of all the employees	2.14%
Number of permanent employees on the rolls of Company	6731

Name of Director and KMP	Remuneration (₹ in Lakhs)		% Increase in remuneration in financial year 2018	Ratio to median Remuneration of all employees
	2018	2017		
<b>Non Executive Directors</b>				
Mr N S Sekhsaria, Chairman	54.10	55.80	(3)	11
Mr Jan Jenisch, Deputy Chairman (appointed w.e.f. 17 Oct 2017)	21.00	4.16	- @	4
*Mr Martin Kriegner	4.30	44.00	- *	1
Mr Christof Hassig	23.00	22.50	2	5
Mr Vijay Kumar Sharma	20.50	21.00	(2)	4
Mr Eric Olsen Resigned w.e.f. September 21, 2017)	-	15.47	NA #	NA
<b>Independent Directors</b>				
Mr Shailesh Haribhakti	42.70	44.10	(3)	9
Mr Sushil Kumar Roongta	44.90	46.90	(4)	9
Mr Ashwin Dani	42.10	43.60	(3)	9
Mr Farrokh K Kavarana	42.90	47.60	(10)	9
Mr Arunkumar Gandhi	53.30	53.80	(1)	11
Ms Falguni Nayar	23.10	26.40	(13)	5
<b>Executive Director</b>				
Mr Neeraj Akhoury MD&CEO (appointed w.e.f. February 4, 2017)	713.10 ^	415.26	- @	146
<b>Other KMPs</b>				
Mr Sunil Nayak Chief Financial Officer	336.15	294.23	14	69



Name of the Director and KMP	Remuneration (₹ in Lakhs)		% Increase in remuneration in financial year 2018	Ratio to median Remuneration of all employees
	2018	2017		
Mr Ramaswami Kalidas Company Secretary & Head Compliance, (appointed w.e.f. September 26, 2017)	103.31	24.12	- @	21
Mr Surendra Mehta Company Secretary & Head Compliance (from April 21, 2017 upto September 25, 2017)	-	59.60	N.A.	N.A.
Mr Burjor Nariman Company Secretary & Head Compliance (Resigned w.e.f. March 31, 2017)	-	29.62	N.A.	N.A.

@ Figures are not comparable as they were appointed during the year 2017

\*Mr Martin Kriegner has waived his right to receive Directors' commission from the year 2018 and sitting fees with effect from the meeting held on 17.10.2018

^this includes the Performance Linked Incentive of ₹ 243.63 lakhs for the year 2017

- The average percentile increase in the salaries of the employees other than Managerial Person (i.e.. MD&CEO) is 8%. Mr Neeraj Akhoury, MD&CEO was appointed on February 4, 2017 and therefore no comparison can be made on a like to like basis. The average increase in remuneration of employees other than the managerial person is in line with the industry practice and is within normal range.
- We affirm that the remuneration paid to the Directors, Key Managerial Personnel and employees is as per the Remuneration Policy of the Company.