



**CLEAN DEVELOPMENT MECHANISM
FORM FOR SUBMISSION OF BUNDLED SMALL SCALE PROJECT ACTIVITIES
(SSC-CDM-BUNDLE)**

SECTION A. General description of the Bundle

A.1. Title of the Bundle:

India-FaL-G Brick and Blocks Project No.4

A.2. Version and Date :

Version 03, August 10, 2012

A.3. Description of the Bundle and the subbundles :

This Bundle consists of 52 FaL-G plants developed by individual entrepreneurs, that have been set up at various locations in the states of Andhra Pradesh, Tamil Nadu, Jharkhand, Chattisgarh and Madhya Pradesh since Dec 2004. The start date of the project is the earliest date of establishment among all the 52 FaL-G plants vide applications received from units individually for participation in CDM project, as per Annex 7 of PDD.

Each FaL-G plant qualifies as a small scale CDM project as per the definition of small scale CDM projects contained in Appendix B to the simplified modalities and procedures for small scale projects. Each FaL-G plant is a standalone project with total operations right from raw material input up to the finished product. Hence a check on debundling is totally irrelevant as the emission reductions out of all these plants, put together, are well within the cap, thus making the concept of debundling untenable.

In order to reduce the transaction cost, a bundling approach is being followed in compliance with the rules prescribed by the Executive Board for bundling small scale projects.

A.4. Project participants:

Name of Party involved (*) (host) indicates a host Party)	Private and/or public entity(ies) project participants (*) (as applicable)	Kindly indicate if the Party involved wishes to be considered as project participant (Yes/No)
Government of India (Host)	Eco Carbon Pvt. Ltd. as Project Entity, on behalf of SPEs listed in Annex- 2.	No



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State of the Netherlands acting through The Netherlands' Ministry of Infrastructure and the Environment (IenM)	International Bank for Reconstruction and Development as Trustee of the Community Development Carbon Fund (CDCF)	Yes
(*) In accordance with the CDM modalities and procedures, at the time of making the CDM-PDD public at the stage of validation, a Party involved may or may not have provided its approval. At the time of requesting registration, the approval by the Party(ies) involved is required.		

Eco Carbon Pvt. Ltd. (ECPL): A private company, which is committed for promoting FaL-G technology as CDM activity on commercial principles. ECPL will provide the technological and operational support to the individual entrepreneurs for implementing the FaL-G plants. ECPL represents the individual entrepreneurs and is responsible for organising the entrepreneurs in order to promote the project activities for carbon transactions.

International Bank for Reconstruction and Development (IBRD): IBRD is the trustee of the CDCF on behalf of the public and private participants. The official contact for the CDM project activity is the International Bank for Reconstruction and Development (IBRD).

The Community Development Carbon Fund (CDCF): Trust fund maintained and operated by the World Bank in its capacity as trustee of the CDCF on behalf of the public and private participants. CDCF will purchase the emission reductions generated by the project and supervise the implementation of community benefit program.

The official contact for the CDM project activity is the Community Development Carbon Fund (CDCF) of the World Bank. The contact details of above participants are given in Annex 1.

SECTION B. Technical description of the Bundle:

B.1. Location of the Bundle:

B.1.1. Host Party(ies):

India

B.1.2. Region/State/Province etc.:

Bundle consists of FaL-G units from ten districts in each State of Andhra Pradesh and Tamil Nadu, one each in the states of Jharkhand, Chhattisgarh and Madhya Pradesh as per the details enlisted in Annex 2.

B.1.3. City/Town/Community etc:

The districts in which the project activities implemented are as follows.



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States	Districts	No. of Plants	Aggregate Capacity - m ³ /year	
			District	State
Andhra Pradesh	Rangareddy	2	7,735	
	Medak	2	21,320	
	Nalgonda	3	17,245	
	Chittor	1	9,100	
	Prakasam	2	6,500	
	Guntur	2	13,790	
	Krishna	10	52,885	
	West Godavari	3	8,600	
	East Godavari	1	5,405	
	Visakhapatnam	2	7,460	150,040
Tamil Nadu	Thiruvallur	6	38,065	
	Salem	1	3,550	
	Cuddalore	1	3,990	
	Karur	2	12,570	
	Coimbatore	4	35,200	
	Trichy	1	12,240	
	Madurai	2	11,120	
	Virudhnagar	1	6,860	
	Tutocorin	2	8,880	
	Tirunelveli	1	3,700	136,175
Jharkhand	East Singhbhum	1	8,070	8,070
Chhattisgarh	Korba	1	5,460	5,460
Madhya Pradesh	Indore	1	7,020	7,020
Total		52		306,765

The capacities of individual plants have been separately shown in Annex 2.

B.1.4. Details of physical location, including information allowing the unique identification of this Bundle:

As the Bundle consists of 52 SPEs spread over various locations in five states viz., Andhra Pradesh, Tamil Nadu, Jharkhand, Chattisgarh and Madhya Pradesh the physical location of the Bundle cannot be specified.

FaL-G plants are located in those clusters and geographical areas, which are characterised by easy availability of the key raw materials such as fly ash and also proximity to the brick markets. A typical FaL-G plant is located in rural areas near an urban growth centre where brick demand exists. Each plant requires at least 2000 square meters of land.

The plants included in the project are identified by a unique code/serial number for records and administrative convenience. The code consists of identity of the State, followed by identity of the district, Bundle No. in roman, and Serial Number of the plant in that bundle. For example, the ninth Plant in bundle No. IV in the state of Andhra Pradesh in Prakasam District is represented by the code:



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AP/PSM/IV/9. As these plants are mostly in tiny sector, located largely in rural sector without significant land mark, indicative geographical coordinates are given in Annex 2.

B.2. Type(s), category(ies) and technology/(ies)/Measure/(s) of the bundle:

The Bundle is categorised under:

Type III: Other Project Types

Version 03, of AMS-III.Z.: Fuel Switch, process improvement and energy efficiency in brick manufacture dt. June 11, 2010.

By virtue of avoiding sintering process and, in turn, use of coal, FaL-G brick/ block production contributes for emission reductions. Nevertheless machines in FaL-G plant require electricity and/or diesel for their operation. The consumption of such forms of energy (electricity and/or diesel) however is much lower compared to the thermal energy consumed for production of burnt clay bricks. FaL-G technology needs cement and/ or lime as process inputs, which are sources of emissions during their production. This is a project not with fuel switch but with total fuel avoidance. It is not a process improvement but altogether a new process. It is energy efficient by avoidance of total thermal energy.

Clay brick manufacturing involves two key processes: i) producing green bricks (clay bricks before firing are called 'green bricks'), and ii) sintering/firing the green bricks in a kiln. The sintering process requires thermal energy inputs. Production of FaL-G bricks and blocks in contrast, does not involve any thermal energy as the product sets and hardens through hydration chemistry, in the lines of cement. Therefore, almost total thermal energy is saved through the use of FaL-G technology. The machinery and equipments used in a FaL-G plant use electricity and/or diesel. But the amount of such energy is much lower compared to the thermal energy used in production of clay bricks. Therefore, total energy savings from the change in brick production process results in substantial energy savings, primarily contributed by the FaL-G technology that completely avoids the use of coal otherwise used in brick production.

The total quantity of emission reductions achieved by the project is estimated as the difference between the emissions due to production of specific volume (m^3) of bricks and blocks produced in the project, after deducting project emissions/ leakages, and the emissions those would have been occurred due to the production of equal volume of clay bricks.

The total quantity of emission reductions achieved by the project is estimated as the difference between the emissions due to production of specific volume (m^3) of bricks and blocks produced in the project, and the emissions those would have been occurred due to the production of equal volume of clay bricks. The net emission reductions for an aggregated and indicative production capacity of 306,765 m^3 bricks/year are estimated at 56,488 tons CO_2 per year. Based on improved efficiency and increase in number of shifts the production may go high resulting in further reductions, though net reductions considered would be 60 kt CO_2 only as per Version 03 of AMS III-Z category.

The Technology

The FaL-G technology, used by SPEs of the Bundle, to produce bricks and blocks, has been invented and patented (No. 198639 dated 13.8.1996) by Dr N Bhanumathidas and N Kalidas, and promoted in the host country by the Institute for Solid Waste Research and Ecological Balance (INSWAREB). The technology

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works with the strength of fly ash, lime and gypsum chemistry. The slow chemistry of fly ash and lime is maneuvered by tapping ettringite phase to its threshold limits through sufficient input of gypsum. Therefore, FaL-G does not require energy intensive equipments such as heavy duty-press or autoclave, which are otherwise required in case of only fly ash and lime brick production. The FaL-G process completely eliminates the thermal treatment, and does not require combustion of any fossil fuel.

The key ingredients of the FaL-G products are fly ash, lime, and gypsum, which are well-known mineral substitutes. All these materials are available in the form of wastes and byproducts from industrial activities and are available in adequate quantities in the areas, where the project activities are located.

FaL-G technology is developed in two approaches, viz. “FaL-G in lime route” and “FaL-G in OPC route”. The patent specifications on FaL-G cover both the approaches. Though FaL-G technology was primarily developed using lime, OPC was also identified as a source of lime to facilitate pozzolanic reactions in FaL-G system. These two approaches have significant bearing on technical point of view in the context of using LT and HT fly ashes as explained below.

INSWAREB has classified fly ash into two categories based on the sintering temperatures of coal in thermal plants and boilers. They are LT (low temperature) fly ash and HT (high temperature) fly ash. The research at INSWAREB established that LT fly ash goes well with lime where as HT fly ash goes well with OPC as per 28-day strength as shown below (pp. 28-30 Fly ash for Sustainable Development, the book authored by Dr Bhanumathidas and Kalidas; 2002).

28-day Compressive strength of FaL-G, MPa

Type of ash	Lime route	OPC route
LT Ash	22.8	20.0
HT Ash	22.0	33.8

However in both the fly ashes either of the routes is interchangeable depending on the logistics of raw material availability and economics. This aspect allowed flexibility in adoption of the technology.

The concept of LT and HT ashes and the related work is the outcome of research during FaL-G development and thus is of proprietary nature. In this background data from INSWAREB labs has authenticity and is considered as third party report.

Byproduct lime is available at almost 1/3rd of the mineral lime cost. Otherwise, it is economical to use Ordinary Portland cement (OPC) over mineral lime and, hence, OPC is preferred in areas where byproduct lime is scarce or not available due to increased FaL-G activity. In view of quality and logistical issues in procuring lime, many entrepreneurs adopt FaL-G in OPC route and some are using both lime and cement. Notwithstanding the choice of lime and/or OPC, the technological flexibilities in FaL-G facilitate the use of blended cements such as Portland Pozzolan Cement (PPC) (fly ash based) also, still maintaining the ultimate quality of the product. In another dimension, FaL-G technology established the use of ground granulated blast furnace slag in association with corresponding complementary reactive-additives to supplement the use of cement. Thus the recipes are tailor-made keeping in view of the quality requirements of the end product.



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The following table gives the raw material inputs per cubic meter, for typical recipes, where the density of FaL-G brick/block is 2,000 kg / m³.

Ingredients	Lime route		Cement route	
	%	kg	%	kg
Fly ash	15	300	15.2	304
Lime [as Ca(OH) ₂]	7.5	150	--	--
Cement	--	--	4.0	80
Gypsum	2.5	50	0.8	16
Filler (aggregate)	75	1500	80	1600
TOTAL	100	2000	100	2000

B.3 Estimated amount of emission reductions over the chosen crediting period:

The project is expected to achieve GHG emission reductions of approximately 564,880 tonnes of CO₂ equivalent in 10 years from operation of 52 FaL-G plants at different locations.

YEARS	Annual Estimation of Emission Reductions (tonnes CO ₂ eq.)
01/10/2012 - 30/09/2013	56,488
01/10/2013 - 30/09/2014	56,488
01/10/2014 - 30/09/2015	56,488
01/10/2015 - 30/09/2016	56,488
01/10/2016 - 30/09/2017	56,488
01/10/2017 - 30/09/2018	56,488
01/10/2018 - 30/09/2019	56,488
01/10/2019 - 30/09/2020	56,488
01/10/2020 - 30/09/2021	56,488
01/10/2021 - 30/09/2022	56,488
Total estimated reductions (tonnes CO ₂ eq.)	564,880
Total number of crediting years	10
Annual average over the crediting period of estimated reductions (tonnes CO ₂ eq.)	56,488

**SECTION C. Duration of the project activity / Crediting period:****C.1. Duration of the Bundle****C.1.1. Starting date of the Bundle:**

01/12/2004

C.2. Choice of crediting period and related information:**C.2.1. Renewable crediting period:**

N.A

C.2.1.1. Starting date of the first crediting period:

N.A

B.2.1.2. Length of the first crediting period:

N.A

C.2.2. Fixed crediting period:**C.2.2.1. Starting date:**

01/10/2012

C.2.2.2. Length:

10 years

SECTION D. Application of a monitoring methodology:**Data and parameters monitored:**

Data and parameters monitored:	
Data / Parameter:	Production-$P_{PJ,y}$
Data unit:	m ³ bricks/ blocks
Description:	SPE maintains the actual quantities of production in number on daily basis, based on each size of brick/block, which is duly converted to volume (m ³) to facilitate computations.
Source of data to be	Stock registers of SPE.



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used:	
Value of data	306,765 m ³ ; used in ex-ante calculations
Description of measurement methods and procedures to be applied:	SPEs record the production of bricks/ blocks on daily basis. These are made available to PP once in a month.
QA/QC procedures to be applied:	Upon receipt of the monthly data on brick/ block production and fuel use (electricity and or /diesel) from the plants, PE will review the data. The personnel of PE will make periodical visits to SPEs' plants to check the diligence of record keeping and the accuracy for ultimate diligence of emission computations.
Any comment:	None

Data / Parameter:	Electricity-EC_{PL,i,v}
Data unit:	kWh
Description:	The electricity consumption is monitored continuously by the Electricity Meter and recorded by the Service Provider (State Electricity Department) monthly or bimonthly based on which the Electricity bills are provided..
Source of data to be used:	Electricity bills provided by the service provider (state electricity department).
Value of data	1,213,517 kWh; used in ex-ante calculations
Description of measurement methods and procedures to be applied:	SPEs submit to PE the electricity bill as provided by the Service Provider. The information is verified and tallied with the records of SPE by the personnel of ECPL periodically. For this purpose ECPL personnel are imparted with in-house training.
QA/QC procedures to be applied:	Refer to section B 6.1 of PDD
Any comment:	NA

Data / Parameter:	Diesel-FC_v
Data unit:	Litre
Description:	Daily consumption of diesel would be monitored, recorded and provided by SPEs to PE on monthly basis.
Source of data to be used:	Stock register.
Value of data	0 litres; used in ex-ante calculations
Description of measurement methods and procedures to be applied:	SPEs record diesel consumption on daily basis and send the details to PE on monthly basis.
QA/QC procedures to be applied:	All the information is verified and tallied with the records of SPE by the personnel of ECPL periodically. For this purpose in-house training is imparted to ECPL personnel. Consumption is cross checked with the purchase bills.



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Any comment:	NA
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Data / Parameter:	Cement-Q_{OPC}
Data unit:	Tons
Description:	Purchase details are provided by the SPEs through monthly statement.
Source of data to be used:	Purchase bills of cement.
Value of data	24,541 tons; used in ex-ante calculations
Description of measurement methods and procedures to be applied:	Quantities of cement as per purchase bills would be taken for computation of leakages.
QA/QC procedures to be applied:	Upon receipt of the monthly data of purchase bills, the personnel of PE will make periodical visits to SPEs' plants to check the diligence of record keeping.
Any comment:	The leakage emissions for using Cement is derived based on the default values of national average.

Data / Parameter:	Mineral Lime-Q_{ML}
Data unit:	Tons
Description:	Purchase details are provided by the SPEs through monthly statement.
Source of data to be used:	Purchase bills of lime
Value of data	0 tons; used in ex-ante calculations
Description of measurement methods and procedures to be applied:	Purchase bills for mineral lime would be taken for computation of leakages.
QA/QC procedures to be applied:	All the information is verified and tallied with the records of SPE by the personnel of ECPL periodically. For this purpose in-house training is imparted to ECPL personnel.
Any comment:	<p>The object of monitoring lime purchases is to compute the leakage emissions. Purchase bills may not be available when by product lime is procured. In such case delivery challans would be accepted for computing the quantity of procurement.</p> <p>The leakage is taken into account only when lime from mineral source is procured. In the case of by product lime, the data is recorded, but no leakages are accounted for as the same would not have any impact.</p>

Data / Parameter:	Performance of project brick/block in terms of Compressive Strength once in six months
Data unit:	MPa
Description:	The brick/ block is tested in a Compressive strength Testing Machine (CTM) in any of the laboratories of polytechnics, engineering colleges, building centers, national laboratories etc., and the test certificates are provided by the laboratory.
Source of data to be	



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used:	Test Certificate as provided by the testing laboratories.
Value of data	NA
Description of measurement methods and procedures to be applied:	The test procedure is followed as per Annex 9 of PDD
QA/QC procedures to be applied:	Calibration of CTM for strength test is taken care by respective laboratories and outside the project boundary.
Any comment:	NA

Monitoring Plan

Day to day data wherever applicable will be recorded by the sub-project entity who sends monthly statements to project entity. These statements are reviewed for the diligence of data, which are then electronically archived for computation of emission reductions. All such archived data would be stored until two years after the end of the crediting period.

In order to ensure due diligence, the PE conducts periodical inspection of units randomly at any given time in a year. For this purpose the PE deploys monitoring personnel who visit the SPEs and inspect their records and tally with their monthly statements. Errors in data, if any, would be corrected at all points of archiving the data. . The monitoring personnel would duly attest the records as a mark of inspection. The PE would randomly check the visits of monitoring personnel in order to ensure due compliance. Management structure for monitoring has been given in Annex 4 of PDD.

Various templates are made to record the data to be monitored. The monitoring personnel of PE would be provided with such templates. As the steps involved in monitoring are simple, in-house training is imparted in recording the data and to translate the same into the computation of ERs.

Based on the monitoring requirements of AMS III-Z as described under B.1, following records would be verified by Inspectors:

Production records:

- Stock register showing daily production

Raw materials inwards:

- Inward stock registers for fly ash, cement and/ or lime.
- Delivery Challans of thermal plants/boilers/Transporters for fly ash.
- Purchase bills of cement and lime
- Delivery Challans for byproduct lime in case of non-availability of purchase bills.

Diesel and/or Power Consumption data

The consumption of diesel is to be recorded on daily basis, and of power on monthly basis. In the case of diesel, the purchase bills would be verified for cross checking the consumption. In case of power, the meter reading and consumption as provided on the state electricity bill would be taken as record. .

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The monitoring personnel keep inspecting the accredited units from time to time through checks and help the SPEs in optimum upkeep of the records in case any deviations are observed. The SPEs, who disregard the advice of monitoring personnel and prove continuously complacent in maintaining the stipulated records, would be dropped from the bundle and would not be entitled to receive carbon credits.

Performance criteria by testing Compressive Strength

The methodology requires making available the test certificates on the strength performance of bricks tested at six-month interval. In the context of testing of bricks/blocks, the SSC WG, at its 22nd meeting clarified that the testing can be undertaken based on the national/regional standards or guidelines applicable to the type of project activity bricks. Testing can also be undertaken as per the procedures provided by the technology provider as long as the testing methods can be substantiated with reference to peer reviewed literature i.e. relevant international journal publications, publications of national/international building research centres etc. As long as the testing procedures in the guidelines/standards are met, the testing itself can be undertaken in polytechnics, engineering colleges, building centers, national laboratories etc.

Accordingly the test procedure as given in PDD shall be adopted and the bricks be tested for their compressive strength at six month interval.

The only code applicable for fly ash bricks in IS: 12894. However, this test procedure has erratically asked for strength test in the lines of tests applicable for clay bricks due to the nomenclature of bricks. As bricks are by and large sold in the market based on physical appearance, with out relying upon codes, there was no concern to challenge the code nor to propose amendment. In this background based on the recommendations of SSC WG at its 22nd meeting, INSWAREB, as the technology provider, has made available a test procedure considering the hydration chemistry, as applicable to that of cementitious products. Based on the above, the test certificates on the strength performance of bricks tested at six-month interval would be made available.

**Annex 1****CONTACT INFORMATION OF PARTICIPANTS IN THE PROJECT ACTIVITY**

Organization:	Eco Carbon Pvt. Ltd.	
Street/P.O.Box:	I Floor, 32-10-55, Shri Venkateswara Colony, Sheila Nagar	
Building:	INSWAREB Laboratory Building	
City:	Visakhapatnam	
State/Region:	Andhra Pradesh	
Postfix/ZIP:	530012	
Country:	India	
Telephone:	++91-891-2516411	
FAX:	++91-891-2517429	
E-Mail:	info@co2credits.biz	
URL:	www.co2credits.biz	
Represented by:		
Title:	Mg. Director	Executive Director
Salutation:	Dr	Mr
Last Name:	Bhanumathidas	Kalidas
Middle Name:		
First Name:	Nateri	Nateri
Department:	Research & Development.	Business Development
Mobile:	++91-98483-69930	++91-98481-91453
Direct FAX:	++91-891-2517429	++91-891-2517429
Direct tel:	++91-891-2516411	++91-891-2516411
Personal E-Mail:	bhanukali@vsnl.com	bhanukali@gmail.com



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Organization:	International Bank for Reconstruction and Development (IBRD) as Trustee for Community Development Carbon Fund (CDCF)
Street/P.O.Box:	1818 H street NW
Building:	MC
City:	Washington
State/Region:	DC
Postcode/ZIP:	20433
Country:	USA
Telephone:	1202 458-1873
FAX:	1202 522 7432
E-Mail:	IBRD-carbonfinance@worldbank.org
URL:	www.carbonfinance.org
Represented by:	
Title:	Manager, Carbon Finance
Salutation:	Mr
Last Name:	Chassard
Middle Name:	
First Name:	Joelle
Department:	ENVCF
Mobile:	
Direct FAX:	
Direct tel:	
Personal E-Mail:	



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Organization:	State of the Netherlands acting through The Netherlands' Ministry of Infrastructure and the Environment(lenM)
Street/P.O.Box:	Rijnstraat 8
Building:	
City:	The Hague
State/Region:	
Postfix/ZIP:	2515 XP
Country:	The Netherlands
Telephone:	0031-70-339.5199
FAX:	0031-70-339.1306
E-Mail:	cdm.dna@minvrom.nl
URL:	
Represented by:	
Title:	
Salutation:	Ms.
Last Name:	Gerards
Middle Name:	
First Name:	Marisa
Department:	
Mobile:	
Direct FAX:	0031-70-339.1306
Direct tel:	0031-70-339.5199
Personal E-Mail:	



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Annex – 2: Details of SPEs together with their geographical coordinates and output

Name & Address of the MIP	Name & status of Authorized Signatory	Geographical Co-ordinates, Deg		SPE ID. No.	Output/yr in m ³
		North	East		
Andhra Pradesh					
Ranga Reddy Dist					
Sindhu Fly ash Bricks SY No.612, Laxmareddy Palem (Pedda Amber Pet), Near Sri Annapurna Transport, Hayathnagar Mandal, Ranga Reddy Dist,A.P.	Ms. V.Rama Devi Proprietor Ph: 98484-97600	17.32	78.64	AP/RNG/IV/1	4,615
Laxmi Chaitanya Enterprises Bowrampet(V) Qutbullapur(M) Ranga Reddy Dist, -500043	Mr. D. Nagi Reddy Proprietor Ph:93469 87073	17.48	78.45	AP/RNG/IV/2	3,120
Medak Dist					
Prakash International Ltd., H.No. 3-114, Sy.No. 79, Alinagar(HO), Chetlapotharam(V), Jinnaram(M), Medak Dist - 502319	Mr. Ashish Goel Partner 99498-28051	17.28	78.37	AP/MDK/IV/3	8,840
Renault Infra Needs Pvt. Ltd., SY.No.386/E1, Tellapur Village, R.C.Puram Mandal, Medak Dist	Mr.Vandanapu Raghu Director 98483-58323	17.47	78.28	AP/MDK/IV/4	12,480
Nalgonda Dist.					
Sri Laxmi Fly Ash Products Pedakaparthi, SY.No. 731/E, Main Road NH-9, Chityal Mandal, Nalgonda Dist.	Mr.K.Krishna Kishore Partner 98480-47659	17.18	79.12	AP/NGD/IV/5	6,435
Sri Lakshmi Thirupathamma Fly Ash Bricks Industries Dondapadu Post, Mellacheruvu Mandal Nalgonda Dist – 508 246.	Mr. M. Guru Prasad Proprietor 98481 87567	16.92	79.98	AP/NGD/IV/6	5,405
Sri Rajya Lakshmi Fly Ash Bricks Industries Ramapuram Post, Mellacheruvu Mandal Nalgonda Dist – 508246	Ms. Rajya Laxmi Proprietor 98481 87567	16.92	79.98	AP/NGD/IV/7	5,405
Chittoor Dist					
Golden Brick Industries Survey No.1433, Pitchinaidu Palle (V), Thondavada Post - 517505. Chandragiri Mandal, Chittoor Dist.	Mr. C.Kulasekhara Reddy Managing Partner 98480 75479	13.60	79.32	AP/CHIT/IV/8	9,100
Prakasam Dist					
Sri Lakshmi Adishesu Quality Bricks Near A.K.P. Junior College, Vodarevu Road , Kunderu, Chirala, Prakasam (Dist)- 523 157	Mr. U.Adi Seshu Manager 99122-04447	15.82	80.35	AP/PSM/IV/9	4,390
Dharani FaL-G Bricks Punur Road, Dronadula (V) S.No.413, Idupulapadu (Via), Martur Mandal, Prakasam Dist-523 190	Mr.P.Basaveswara Rao Manager 90524 41661	15.87	80.20	AP/PSM/IV/10	2,110



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Name & Address of the MIP	Name & relation of Authorized Signatory	Geographical Co-ordinates, Deg		SPE ID. No.	Output/yr in m ³
		North	East		
Andhra Pradesh					
Guntur Dist					
Sri Sarada Krupa FaL-G Bricks D.No. 15/D, Vankayalapadu (V) Boyapalem (Panchayati), Edlapadu Mandal Guntur Dist - 522 233	Mr. K.Srinivasa Rao Proprietor 98482 14190	16.17	80.22	AP/GTR/IV/11	5,850
Hanuman Building Materials Kanitheru (Village & Post) Near Railway Gate, Tadikonda(M), Guntur Dist.	Mr. V. Sambasiva Rao Managing Partner 98491 33135	16.37	80.50	AP/GTR/IV/12	7,940
Krishna Dist					
Venkata Lakshmi Industry R.S. No.244/2,Sangapadu Road, Anasagaram (Village), Nandigama - 521 165, Krishna(Dist),	Mr. P.Nanda Kishore Manager 94908-78737	16.78	80.27	AP/KRIS/IV/13	4,040
Raja Fly Ash Products R.S.No. 44/2A, Kachavaram Village, Ibrahimpattanam(M), Krishna Dist - 521 175	Mr.D.Srinivasa Rao Manager 98481-06236	16.60	80.47	AP/KRIS/IV/14	3,250
Sri Sridevi Fly Ash Products R.S.No. 43/1 Kachavaram Village Ibrahimpattanam (M), Krishna Dist- 521 175	Mr.D.Srinivasa Rao Manager 98481-06236	16.60	80.47	AP/KRIS/IV/15	3,250
Sri Tirumalagiri Venkateswara Swamy Fly Ash Bricks Plot No. 117,118, IDA Tirumalagiri Village, Jaggaiahpet (M), Krishna Dist - 521 175	Mr.G.Venkateswarlu Manager 98492-42798	16.88	80.10	AP/KRIS/IV/16	4,875
Sri Sai Gayatri Brick Products R.S. No. 57, Ravikampadu, SM Pet (V) Jaggaiahpet (M, Krishna (Dist)	Mr. Ch. Chandra Sekhar Rao Manager 98484-93183	16.88	80.10	AP/KRIS/IV/17	4,160
Jaya Chandra Fal-G Products Ramanapudi, Gudivada Rural, Krishna Dist - 521 180	Mr.P.Subrahmanyaswar a Rao Manager 92474 01855	16.42	81.00	AP/KRIS/IV/18	4,040
Sri Dhanalakshmi Fly Ash Products R.S. No. 497/8, NH-9 Road, Opp: Siva Sai Kshetram, Bypass Road, Kanchikacherla Mandal, Krishna Dist - 521 180	Mr..M.Yedukondalu Proprietor 94903 76445.	16.67	80.38	AP/KRIS/IV/19	4,040
Sri Vijaya Brick Industries Pamarru Road, Ramanapudi (V) Gudivada (M) Krishna Dist	Mr.C. Adinarayana Choudary Proprietor 94901 96499	16.42	81.00	AP/KRIS/IV/20	4,040
Sri Devi Fly Ash Bricks R.S. No. 111/2, NH-9 Road, West IBM Ibrahimpattanam Mandal, Krishna Dist.	Mr. K. Krishna Kishore Proprietor 98480 47659	16.60	80.47	AP/KRIS/IV/21	9,960
Kwality Fal-G Products R.S.No. 111/2, NH Road No:9, Jupudi (P), Ibrahimpattanam (M), Krishna Dist.	Mr. Y.V.K. Prasad Proprietor 99515 69999	16.60	80.47	AP/KRIS/IV/22	11,230



CDM-SSC-BUNDLE

Name & Address of the MIP	Name & relation of Authorized Signatory	Geographical Co-ordinates, deg		SPE ID. No.	Output/yr in m ³
		North	East		
West Godavari Dist					
Jaya Vasavi Industries 187/3, Chinamamidipalli Narsapur- 534 275, W.G.Dist.,	Mr.Ch.S.S.Nagabhusha nam Proprietor 98481-74346	16.43	81.70	AP/WG/IV/23	2,930
Durga Fly Ash Brick Industry D.No. 17-40, Vadalapatla Road, Bhimadole , W.G. Dist- - 534 425	Mr. J. Veeresh Babu Manager 99895 55244	16.80	81.25	AP/WG/IV/24	3,510
Lakshmi Brick Industry Opp: Lakshmi Narayana Rice Mill, Chataparru Road, Venkatapuram (Panchyathi), Eluru, W.G. Dist	Mr. Ch.S.V.V.S. Narayana Proprietor 94404 41849	16.70	81.10	AP/WG/IV/25	2,160
East Godavari Dist					
Deva Devi FaL-G Bricks S.No. 97/8, 9, 11. Yanam Road, Uppalanka, Karapa Mandal, E.G. Dist.	Mr. T.Satyanarayana Reddy Manager 92466 90699	16.90	82.23	AP/EG/IV/26	5,405
Visakhapatnam Dist.					
Siva Baba Fly Ash Building Material Centre S.No. 478/1,2,3, Ravada Village, Paravada Mandal Visakhapatnam Dist	Mr.K.V. Srinivasa Rao Manager 98497 58282	17.58	83.08	AP/VSP/IV/27	3,610
Lakshmi Teja Fal-G Brick Industries Plot No. 187, Kanakadurganagar, GPR Layout, Lankelapalem, Visakhapatnam Dist	Mr.B.Sunkanna Proprietor 96420-67788	17.68	83.08	AP/VSP/IV/28	3,850
Tamil Nadu					
Tiruvallur Dist.					
SRS Industries Vayaloor Village, No.25, Minjur- Kattur Road, Minjur, Punneri Taluk, Thiruvallur Dist.- 601 203	Mr.T.Sankar Proprietor 94445-47777	13.27	80.27	TN/TVR/IV/29	4,260
SRS Fal-G Bricks No.25, Minjur- Kattur Road, Vayaloor - 601 203 Punneri Taluk, Thiruvallur Dist.	Mr.J.Balasubramanian Proprietor 94440-54757	13.27	80.27	TN/TVR/IV/30	7,660
Boomi Brick Industries Veeraraghavapuram (V),Ikkadu Post, Tiruvallur Dist., Tamilnadu	Mr.T.T.Balaji Proprietor 04439-89666	13.13	79.90	TN/TVR/IV/31	6,660
Sri Kumaran Agencies Veeraraghavapuram (V),Ikkadu Post, Tiruvallur Dist., Tamilnadu	Ms.R.Varalakshmi Proprietor 94431-01108	13.13	79.90	TN/TVR/IV/32	6,845
Sri Balaji Fly Ash Bricks Works No-108, G.N. Chetty Street, Arani - 601 101. Subramanyam Nagar, Ponneri Taluk, Tiruvallur Dist	Mr.P.Gnanaprakasam Partner 98944 16093	13.22	80.13	TN/TVR/IV/33	6,660
Sree Kandan Traders Survey No. 281/3, Veerareghavapuram (V),Ikkadu Post, Tivallur Dist, Tamilnadu	Ms.T.Mallika Proprietor 94432 09460	13.13	79.90	TN/TVR/IV/34	5,980
Salem Dist					
R M Flyaash Bricks S.F. No. 42/2A3, Vellakalpatty, Chettichavadi (P), Salem Dist - 636 012	Mr.V.Raja Proprietor 99430-11155	11.18	78.15	TN/SLM/IV/35	3,550



CDM-SSC-BUNDLE

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		North	East		
Cuddalore Dist					
Power Fly Ash Bricks R.S.No. 236, Vellapakkam Road, Azahia Natham, Cuddalore Dist - 607 001	Mr. T. Siva Kumar Proprietor 98652 67526	11.73	79.73	TN/CDL/IV/36	3,990
Karur Dist.					
Vela Fly Ash Brick Pallamarutha Patti, Pavithram, Aravakurichi Taluk, Karur Dist - 639 111	Mr. V. S. Ramesh Proprietor 94431 22861	10.90	78.08	TN/KR/IV/37	7,600
C.P.M Fly Ash Brick S.F.No.234/3, Palamalai North, Pavithram (P), Aravakurichi Taluk, Karur Dist	Mr. C. Loganathan Manager 98433 25592	10.90	78.08	TN/KR/IV/38	4,970
Coimbatore Dist					
ASR Bricks Ponmani Illam, Plot No - 16, C.S. Nagar Extension, Vadavalli, Coimbatore - 641 041	Mr. A.S. Ravi Chandan Proprietor 98652 58684	11.02	76.90	TN/CBT/IV/39	6,910
KMD Fly Ash Bricks SF No. 3, Karattumedu, Keerannatham Rd. Saravanam Patti Post, Coimbatore 641 035	Mr.A.Radhakrishnan Manager 99429 11122	11.08	77.00	TN/TVR/IV/40	6,260
Selva Vinayakar Enterprise SF No. 200/1B7A, Kannampalayam, Ravuthar Privu, Palladam Taluk, Coimbatore- 641 402	Mr. B. Siva Prakash Proprietor 97918 02727	10.98	77.08	TN/CBT/IV/41	6,430
C.R. & Associates SF.No. 4/2A, Chinna Neeli Thoppu, Thethepalayam Post, Siruvani Road, Coimbatore- 10.	Mr. R. Vijay Anandh Partner 98422 40009	10.95	76.88	TN/CBT/IV/42	15,600
Trichy Dist					
Sri Annamalaiyar Power Bricks (P) Ltd., No.D-31, 7th Cross, Thillai Nagar East, Trichy Dist. - 18.	Mr. V. Siva Kumar Proprietor 98428 64246	10.80	78.67	TN/TCH/IV/43	12,240
Madurai Dist					
Vishal Bricks Near Moodu Palam, Chathirapatty, Alanganllur Road, Velichanatham, Madurai-14.	Ms.N. Bhuvaneswari Proprietor 98421 68285	9.95	78.08	TN/MDU/IV/44	4,700
Arasaan Hi-Tech Brick and Blocks S.No. 174/1 & 2. Karisalkulam Main Road, Samanatham, Madurai - 9.	Mr.D. Subramanian Proprietor 93444 73077	9.87	78.13	TN/MDU/IV/45	6,420
Virudhunagar Dist					
SMS Bricks 221, Cholaapuram Main Road, Ilanthiraikondan - 626 142. Rajapalayam Taluk. Virudhunagar Dist	Mr. P. Murugan Proprietor 94434 26509,	9.45	77.55	TN/VDN/IV/46	6,860



CDM-SSC-BUNDLE

Name & Address of the MIP	Name & relation of Authorized Signatory	Geographical Co-ordinates, Deg		SPE ID. No.	Output/yr in m ³
		North	East		
Tuticorin dist					
Mandadiar Bricks 7/76, Kamaraj Nagar, Servaikaran Madam(post), Pudukottai Tuticorin Taluk, Tamil Nadu-628 103.	Mr. R. Lipton Proprietor 94431 36614.	8.78	78.12	TN/TTC/IV/47	4,440
JP ECO TEC Industries 7/76A, Kamarajar Nagar, Servaikaran Madam, Pudukottai - 628 103, Tuticorin Taluk and Dist.	Mr.R.Lipton Manager 94431 36614	8.78	78.12	TN/TTC/IV/48	4,440
Tirunelveli Dist					
Annai Hi-Power Bricks Annai Nagaram, Trivandrum Road, Ponnakudi, Tirunelveli Dist - 627 151.	Mr.S. Chidambara Kartikeyan Proprietor 93442 20037	8.72	77.67	TN/TNV/IV/49	3,700
Jharkhand State					
East Singhbhum Dist					
Balaji Bricks Udyog Pichhli Village, Shankarda Post, P.S.-Potka Mandal, East Singhbhum Dist, Jharkhand-832 107	Mr. Sandeep Murarka Partner Ph: 0657-22906045	22.73	86.20	JK/ESB/IV/50	8,070
Chhattigarh State					
Korba Dist					
Shiva Udyog 10th K.M.Stone, Korba- Champa Road Village & Post Uрга Dist, Chhatisgarh	Mr. R.S. Modi Proprietor 98271-96701	22.38	82.70	CG/KRB/IV/51	5,460
Madhya Pradesh State					
Dhar dist.					
Munnalal Pannalal Constructions Pvt Ltd 657-658. Industrila Area, Sector III, Pithampur, Dhar Dist, Madhya Pradesh.	Mr.Premendra Singhal Director 98260-28853	22.73	75.85	MP/DHR/IV/52	7,020