

# NAGPUR SOLID WASTE PROCESSING AND MANAGEMENT PRIVATE LIMITED

Registered Office: A-513, 5th Floor, Kohinoor City, Kirol Road, Kurla (West), Mumbai- 400070

Tel: (91 22)- 71084444, Fax: (91 22) 71084100

CIN NO. : U90000MH2015PTC262300, Website: www.esselinfraprojects.com

## PUBLIC NOTICE

Inviting Suggestions & Objections on Nagpur Solid Waste Processing and Management Pvt Ltd's Petition for determination of Tariff for Sale of Electricity generated from its 11.5 MW capacity Municipal Solid Waste based power project to be commissioned at Nagpur to the Distribution Licensees in Maharashtra  
Case No. 158 of 2017

- Nagpur Solid Waste Processing and Management Pvt Ltd (NSWPMP)** has filed a Petition (Case No. 158 of 2017) for determination of Tariff for sale of electricity generated from its 11.5 MW capacity Municipal Solid Waste (MSW) based power project to be commissioned at Nagpur to the Distribution Licensees in Maharashtra. The Petition is based on Sections 62(1)(a) and 86(1)(e) of EA 2003 (as amended from time to time), Regulation 8.1 and 8.2 of MERC (Terms and Conditions of Determination of Renewable Energy Tariff) Regulations, 2015 and other relevant Regulations.
- The Commission has admitted the Petition on **30 November, 2017** and directed NSWPMP to publish a Public Notice under section 64(2) of the Electricity Act, 2003 inviting suggestions/objections from the public.
- NSWPMP is a company incorporated under Companies Act, 2013 and is promoted by Essel Infraprojects Limited (EIL) which has more than 10 years of experience in infrastructure industry. Nagpur Municipal Corporation (NMC) invited tenders for construction, operation and maintenance of a MSW facility for treating the MSW on Design, Build, Finance, Operate and Transfer (DBFOT) basis. Consortium of Essel Infraprojects Ltd. and Hitachi Zosen India Pvt. Ltd was awarded the bid. Consortium has promoted and incorporated NSWPMP as special purpose vehicle for this project.
- NSWPMP has entered into Concession Agreement with the NMC on 4 May, 2017. As a part of the Concession Agreement, NMC has allotted 10 acres of land to NSWPMP at Bhandewadi, Nagpur on long term lease for a concession period of 15 years.
- NSWPMP shall design, built, finance and operate the plant for a period of 15 years (including 2 years of construction period) commencing from Letter of Award (LoA) date. At the end of concession period, NSWPMP will transfer the entire project facilities to the NMC without any cost.
- NSWPMP has selected Hitachi Zosen's incineration technology for processing the waste and electricity generation. This technology is based on highly engineered and reliable grate system which has a long and successful history all over the world with more than 833 plants installed.
- The Scope of Work covers following main activities:
  - Design, construction and operation of 800 (+/- 20%) MT per day mixed MSW processing facility at Bhandewadi, Nagpur for the assured MSW quantity during the Concession Period.
  - Provision and operations of adequate number of suitable vehicles for transport of MSW within the facility.
  - Closure and maintenance of existing scientific Landfill till 15th year of project life as per Solid Waste Management Rules 2016.
  - Design, construction and operation of new Scientific Landfill and disposal of process remnants and residual inert matters. The new SLF will comprise of 3 cells which shall be closed at the end of 4th, 9th and 13th year from COD. Closed SLFs would be maintained for 15 years from the date of their respective closures.
  - Performance and fulfillment of all other obligations of the Concessionaire in accordance with the provisions of this Agreement and matters incidental thereto (relocation of waste dumped etc.) or necessary for the performance of any or all of the obligations of the Concessionaire under the Agreement.
- NSWPMP has estimated the total capital cost of the project as Rs 218.80 crores. As per the provisions of the Concessions Agreement, NMC shall provide Viability Gap Funding support of up to Rs. 70 crores subjected to the terms and condition of Concession Agreement.
- The salient features of the Petition are provided below:

### A. Capital Cost

**Table 1: Cost Break-up for proposed 11.5 MW MSW Power Project at Nagpur**

S.No.	Project Cost	Amount (in Rs Lakhs)
1	Plant & Machinery	13,078.80
2	Building & Civil Cost (Inc. land preparation)	2,481.50
3	Engineering expense	700.00
4	Transmission Cost	477.75
5	SLF (Inc. ash disposal)	1,029.00
6	Rehabilitation of existing SLF / Land Capping	441.00
	<b>Total Hard Cost</b>	<b>18,208.05</b>
7	Contingency Cost	546.24
8	Consultancy Charges	455.20
9	PMC charges	273.12
10	Preoperative expenses	182.08
11	Financing cost	364.16
12	Project development Fee paid to NMC	218.00
13	IDC	1,633.72
	<b>Total Soft Costs</b>	<b>3,672.52</b>
	<b>Total Cost of Project</b>	<b>21,880.58</b>

### B. Project Parameters

**Table 2 : Parameter Assumptions**

Head	Sub-Head	Sub-Head (2)	Unit	Values
Power Generation	Capacity	Installed Power Generation Capacity	MW	11.50
		Auxiliary Consumption Factor	%	18.32%
	PLF (during 1st year after stabilization)	PLF (during 1st year after stabilization)	%	65.00%
		PLF (2nd year onwards)	%	80.00%
	Commercial Operation Date	mm/yyyy	24 months	
Useful Life	Years	13.00		
Project Cost	Capital Cost	Normative Capital Cost	Rs. Lakh/ MW	1,902.66
		Capital Cost	Rs. Lakh	21,880.58
		Capital Subsidy, (if any)	Rs. Lakh	7,000.00
		Net Capital Cost	Rs. Lakh	14,880.58
Financial Assumptions	Debt/Equity	Tariff Period	Years	13.00
		Debt	%	70%
		Equity	%	30%
		Total Debt Amount	Rs. Lakh	10,416.40
		Total Equity Amount	Rs. Lakh	4,464.17
	Debt Component	Loan Amount	Rs. Lakh	10,416.40
		Moratorium Period	Years	-
		Repayment Period	Years	10.00
	Equity Component	Equity Amount	Rs. Lakh	4,464.17
		Return on Equity for first 10 years	% p.a.	16.00%
Depreciation	Return on Equity 10th year onwards	% p.a.	16.00%	
	Discount Rate	%	10.43%	
	Depreciation Rate for first 10 years	%	7.00%	
Incentive	Depreciation Rate for 11th year onwards	%	6.67%	
	Generation Based Incentives, if any	Rs. L p.a.	Not Applicable	
Operation and Maintenance	O&M Expense	During Active Operations Period	INR lakhs for the first year	2052.1
		Additional O&M for periodic maintenance	to be carried out in 5th and 10th year	INR Lakh
Annual Escalation Factor for Opex	Annual Escalation Factor for Opex	During Active Operations Period	%	5.72%
Working Capital	O&M Expense	(% of O&M expenses)	%	15%
		Receivables	Months	2.00
Fuel Stock	Interest on Working Capital	Months		-
		% p.a.		12.80%
Tipping Fee	Tipping Fee	Tipping Fee : yr-1	Rs. / Tonne	225.00
		Annual Increment	% p.a.	4.50%
		Tipping Fee utilised for post closure obligation	INR Lakhs	95.90
Post Closure	Post Closure Period	Years		15.00
		Capital Expenditure for each Post Closure obligation	INR Lakh / Closure at Present cost	60.00
		To be incurred at the end of 4th year from COD		60.00
		To be incurred at the end of 9th year from COD		60.00
Annual Inflation rate on Capex amount	For post closure obligation	To be incurred at the end of 13th year from COD		60.00
		%		4.00%
Fuel Related	Fuel Type	MSW as fuel	%	100%
		Supplementary Fuel (RDF, etc.)	%	Not Applicable
		NCV of pre-processed MSW	kcal/kg	1,800.00
		GCV of fossil Fuel (coal)	kcal/kg	Not Applicable
		MSW Price (fuel type — 1): yr-1	Rs/MT	-
		RDF Price (fuel type — 2): yr-1	Rs/MT	-
		Fossil fuel price (coal): yr-1	Rs/MT	Not Applicable
Fuel price escalation factor	% p.a.	Not Applicable		

### C. Levelised Tariff : The levelised tariff proposed by the Petitioner without and with consideration of VGF is:-

**Table 3 : Levelised Tariff**

Levelised tariff for 13 years (without considering VGF) (Rs/kWh)	10.04
Levelised tariff for 13 years (considering VGF) (Rs/kWh)	7.80

### D. Tariff computation Sheet : The detailed computation is provided in the following table:-

**Table 4: Determination of Levelised Tariff**

Units Generation	Unit	Year >>	1	2	3	4	5	6	7	8	9	10	11	12	13
Installed Capacity	MW		11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50
Gross Consumption	MU		65.48	80.59	80.59	80.59	80.59	80.59	80.59	80.59	80.59	80.59	80.59	80.59	80.59
Auxiliary Consumption	MU		12.00	14.77	14.77	14.77	14.77	14.77	14.77	14.77	14.77	14.77	14.77	14.77	14.77
Net Energy	MU		53.48	65.83	65.83	65.83	65.83	65.83	65.83	65.83	65.83	65.83	65.83	65.83	65.83
Fixed Cost	Unit	Year >>	1	2	3	4	5	6	7	8	9	10	11	12	13
OEM Expenses	Rs. Lakh		2052.13	2169.51	2293.61	2424.80	3733.36	2710.13	2865.15	3029.04	3202.30	4808.78	3579.12	3783.85	4000.28
Depreciation	Rs. Lakh		1,041.64	1,041.64	1,041.64	1,041.64	1,041.64	1,041.64	1,041.64	1,041.64	1,041.64	1,041.64	992.04	992.04	992.04
Interest on Term Loan	Rs. Lakh		1,217.16	1,089.03	960.91	832.79	704.67	576.55	448.43	320.30	192.18	64.06	-	-	-
Interest on Working Capital	Rs. Lakh		150.32	172.12	173.44	174.84	188.80	177.88	179.54	181.28	183.13	200.27	187.15	189.34	191.64
Return on Equity (Pre-Tax)	Rs. Lakh		714.27	714.27	714.27	714.27	714.27	714.27	714.27	714.27	714.27	714.27	714.27	714.27	714.27
Tax on Equity	Rs. Lakh		247.19	247.19	247.19	247.19	247.19	247.19	247.19	247.19	247.19	247.19	247.19	247.19	247.19
Less: Revenue from Tipping Fee	Rs. Lakh		561.10	590.66	621.56	653.85	687.58	722.84	759.68	798.19	838.42	880.46	924.40	970.31	1,018.29
Net Fixed Cost	Rs. Lakh		4,862.37	4,843.88	4,810.30	4,782.50	5,943.24	4,745.74	4,737.47	4,736.51	4,743.29	6,196.85	4,796.50	4,957.54	5,128.34
Per Unit Cost of Generation	Unit	Year >>	1	2	3	4	5	6	7	8	9	10	11	12	13
OEM Expenses	Rs./kWh		3.84	3.30	3.48	3.68	5.67	4.12	4.35	4.60	4.86	7.31	5.44	5.75	6.08
Depreciation	Rs./kWh		1.95	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.51	1.51	1.51
Interest on Term Loan	Rs./kWh		2.28	1.65	1.46	1.27	1.07	0.88	0.68	0.49	0.29	0.10	(0.00)	(0.00)	(0.00)
Interest on Working Capital	Rs./kWh		0.28	0.26	0.26	0.27	0.29	0.27	0.27	0.28	0.28	0.30	0.28	0.29	0.29
Return on Equity (Pre Tax)	Rs./kWh		1.34	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Tax on Equity	Rs./kWh		0.46	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Less: Revenue from Tipping Fee	Rs./kWh		1.05	0.90	0.94	0.99	1.04	1.10	1.15	1.21	1.27	1.34	1.40	1.47	1.55
Net Fixed Cost (Net Tariff)	Rs./kWh		9.09	7.36	7.31	7.26	9.03	7.21	7.20	7.19	7.20	9.41	7.28	7.53	7.79
Levelised Tariff	Rs./kWh	7.80													

10. Copies of the following documents can be obtained on written request from the office of NSWPMP as mentioned below:

- Executive Summary of the Petition (free of cost, in English or Marathi)
- Detailed Petition documents along with CD (in English) (on payment of Rs. 150/- by Cash/ DD) drawn on "Nagpur Solid Waste Processing and Management Pvt Ltd" payable at Mumbai.
- Detailed Petition documents (in English) (on payment of Rs. 100/-).
- CD of detailed Petition document (in English) (on payment of Rs. 50/-).

Office	Address	Telephone / Fax No	Email
	18th Floor, A Wing, Marathon Futurex, N. M. Joshi Marg, Lower Parel, Mumbai 400 013. T: +91-22-71084542, Mobile: 9930480548, Mobile: 9823290100	022-71084542/71084100	maresh.ghagare@utility.esselgroup.com and jeewan.sonwane@infra.esselgroup.com

11. The Commission has directed NSWPMP to invite suggestions/objections from the public on its Petition through this Notice. Suggestions/Objections may be sent in English or in Marathi, in six (1+5) copies, to the **Secretary, Maharashtra Electricity Regulatory Commission, 13th Floor, Centre No.1, World Trade Centre, Cuffe Parade, Mumbai-400005; or by Fax or E-mail [Fax: 22163976, E-Mail: mercindia@merc.gov.in] by Thursday, 28 December, 2017**, along with proof of service on Shri. Mahesh Ghagare, Nagpur Solid Waste Processing and Management Pvt. Ltd., 18th Floor, A Wing, Marathon Futurex, N. M. Joshi Marg, Lower Parel, Mumbai 400 013. Tel/Fax: (91 22) 71084542/ 71084100, **Email id: maresh.ghagare@utility.esselgroup.com** and should carry the full name, postal address and e-mail address, if any, of the sender. It should be indicated whether the suggestion/objection is being filed on behalf of any organization or category of consumers. It should also be mentioned if the sender wants to be heard in person, in which case opportunity would be given by the Commission at the Public Hearing to be held at **Office of the Commission, 13th Floor, Centre No.1, World Trade Centre, Cuffe Parade, Colaba, Mumbai-400005, on Friday, 29 December, 2017, at 11:00 Hours**, for which no separate notice will be given.

12. NSWPMP shall reply to each of the suggestions/objections received within three days of its receipt for all the suggestions/objections received till **Thursday, 28 December, 2017**. Rejoinders may be submitted on the replies provided by NSWPMP either during the Public Hearing or by **Monday, 1 January, 2018**.

13. The detailed Petition document and the Executive Summary are available on NSWPMP's website [www.esselinfraprojects.com](http://www.esselinfraprojects.com) and link <http://esselinfraprojects.com/downloads.php> and the Executive Summary is also available on the websites of the Commission [www.mercindia.org.in](http://www.mercindia.org.in) / [www.merc.gov.in](http://www.merc.gov.in) in downloadable format (free of cost).

Place : Mumbai  
Date : December 5, 2017  
Signature : Sd/-  
Name : Jeevan Sonwane  
Destination : Project Director  
Nagpur Solid Waste Processing and Management Pvt. Ltd.