Business Feasibility Report on Manufacturer of Bio/CNG Gas & Organic Fertilizer

Next Era Energy Pvt. Ltd. / Rohan Traders JV

ROHAN TRADERS

NEXTERA ENERGY

Project Description

- This project is promoted by Nextera Energy Pvt Ltd (“ The Company”) and Rohan Traders (“The sole proprietorship firm”).
- This project has been designed to transform waste to energy through anaerobic digestion or fermentation or decomposition of the organic waste by the action of methanogenic bacteria.
- This project has been carried out at Damak Municipality on design, built,finance, own operate and transfer (DBFOOT) vide concessional agreement between Damak Municipality, AEPC and Nextera Energy Pvt. Ltd./ Rohan Traders JV dated 24th Jan 2020 for 20 years.

Constitution of the Entity: JV

Obtained PAN on: 10th Magh 2076 BS

PAN No: 613017239

Next Era Energy Pvt. Ltd.

Director: Mr. Bimal Khatiwada

Est: 2075

Sector: Waste Collection and Management

Rohan Traders

Proprietor: Mr. Yubaraj Ghimire

Est: 2061 BS

Sector: Trading (Distribution, Wholesale)

60% ← Project Cost Ratio → 40%

The Team

Yubaraj Ghimire

Chairman

- One of the prominent business man in the sector of trading.
- 18 years of experience in Coca-Cola Distributor
- Currently running 7 entities solely

Bimal Khatiwada

Managing Director

- One of the prominent businessman in the sector of trading
- 14 years of experience in Electronics Business
- Currently running 5 entities solely

Tara Devi Dahal

Director

- One of the prominent player in the sector of Poultry
- 3 years of Experience in Hatchery and Poultry Sector

Mission and Vision

Our mission

To help people of local vicinity initially

Having energy for the domestic use

To help some of the industries such as brick industries for having energy for commercial purpose.

To promote green energy in order to save fossil fuel

To help to keep environmental Balance with our existing fossil

To develop and operate state-of-the-art waste-to-energy conversion facilities

To minimize the negative impact of waste on the environment, reduce reliance on fossil fuels, and contribute to a circular economy.

Our Vision

To make environment clean, mitigate pollution and improve public health.

To strengthen national energy situation stronger with green energy

To demonstrate where all the city can have a city green power station from municipal waste

To serve community with green energy

To create a sustainable and clean future by efficiently converting waste into renewable energy, while promoting environmental stewardship and resource conservation.

Proposed Business Legal Status

Currently, the entity have been incorporated as joint venture which is promoted by Nextera Energy Pvt. Ltd. and Rohan Traders vide registration through inland revenue office Damak.

The entity is contemplating to get itself registered with Department of Industry either through the province level or directly through the DoI before starting the commercial production

Timeline and Milestone

JV Registration in PAN
10th Magh 2076

Fund Contributed by Promoter

A) Nextera Energy Pvt. Ltd
5.19 Crore approx.

B) Rohan Traders
0.69 Crore

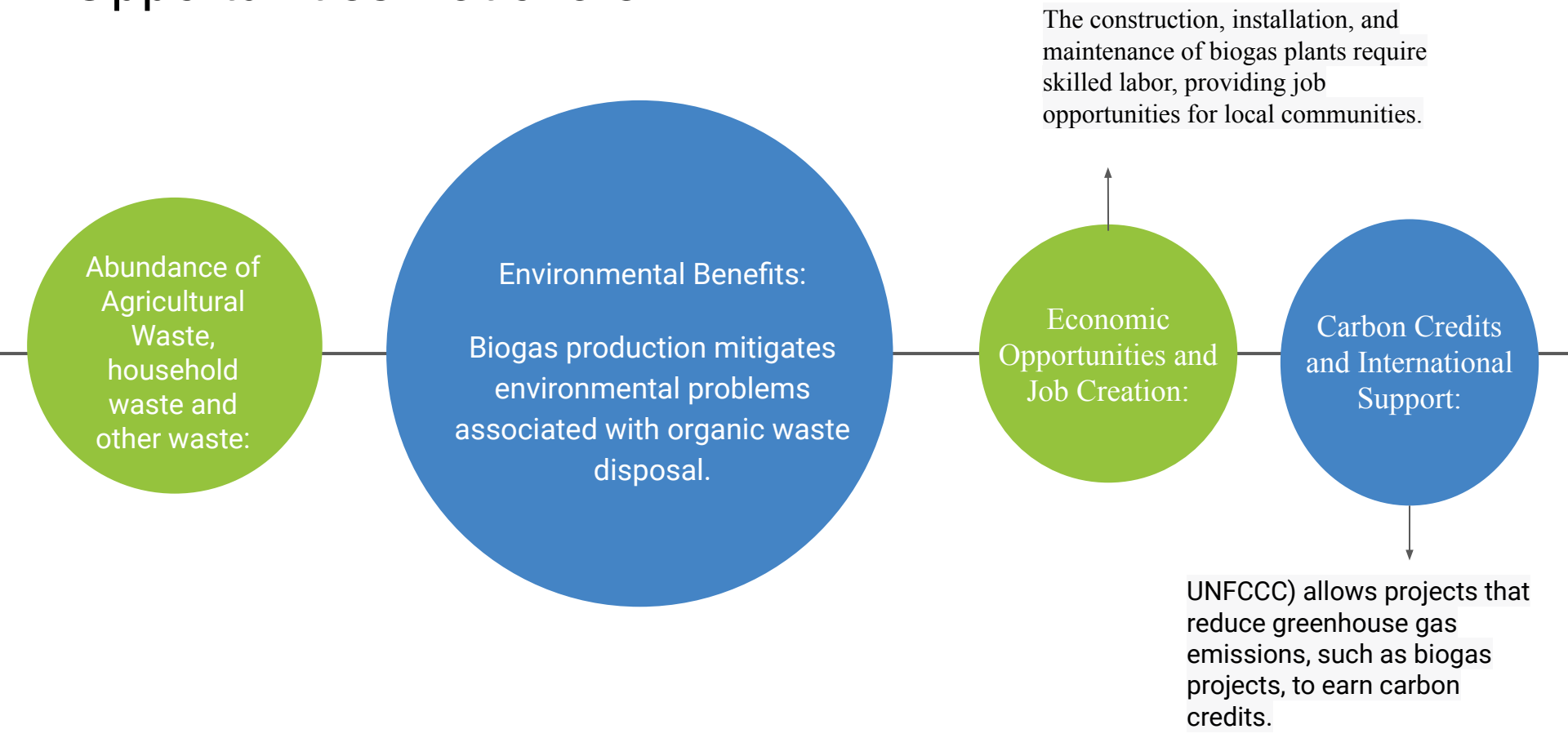
Grant Received from AEPC (5.29 Crore)

Acquisition of Fixed Assets
WDV=13.54 lakhs

Procurement of Machinery (7.45 Crore)

Physical Infrastructure (7.08 Crore)

Opportunities Rationale



Particulars	Total	%
Towards Fixed Capital		
Preliminary DPR Cost	2,000,000	**0.57**
Land Development Expenses	5,250,000	**1.50**
Buildings, Constructions & Furniture & Fixtures	131,380,000	**37.58**
Vehicle	10,500,000	**3.00**
Plant and machinery	169,023,680	**48.35**
Electric items labour including charges	16,772,000	**4.80**
Softwares & ERP	1,080,000	**0.31**
Pre Operating Factory Site Expenses	3,121,620	**0.89**
	339,127,300	**97.01**
Towards Working Capital	10,442,005	
Total	**349,569,305**	

Means of Finance

Particulars	Total	Facility Utilised	Additional Requirement	Proposed Bank Finance
Venturere's Contribution	86,296,962	58,898,212	27,398,750	-
Long Term Loan from Bank / Institution	200,328,232	39,000,000	161,328,232	161,328,232
Short Term Loan from Bank / Institution	10,000,000	-	10,000,000	10,000,000
Government Grant	52,944,112	52,944,112	-	-
Total	**349,569,305**	**150,842,324**	**198,726,981**	**171,328,232**

Utilization of Funds

Particulars (Additional Requirement)	Total
Venturere's Contribution	27,398,750
Short Term Loan from Bank / Institution	10,000,000
Long Term Loan from Bank / Institution	200,328,232
Total	**237,726,982**

Utilization	Total
Towards Repayment of Bank Loan (Nabil Bank Loan)	37,257,183
Towards Repayment of COOP Loan	31,179,000
Towards Working Capital	10,442,005
Towards Fixed Assets	158,848,794
Total	**237,726,982**

Current Scenario

Current Position	NRs
Promoter's Contribution	58,898,212.00
Government Grant	52,944,112.00
Bank Borrowings	
(i) Long term	39,000,000.00
COOP Borrowings	
(i) Short Term	27,350,000
Various Payables	7,995,983.79
Total Investment	**186,188,308**

Current Scenario

Investment	
Towards plant and machinery and Civil Works	145,389,238
Towards Intangibles	51,200
Towards Admin Assets	1,303,347
Towards Current Assets	14,086,940
Accumulated Loss	5,195,236
Towards Advances and Construction of Current year	20,162,347
Total Investment	**186,188,308**

Direct Material Consumption Chart

S.No.	Raw Materials	Provider	Unit	Raw material Per Day		Remarks
				Qty(in Kgs)	Amount (Rs.)	
1	**Waste (Degradable & Non Degredable)**	Nextera Enegry Pvt. Ltd	Kgs	**41,000**	-	Only 30% of Total is utilised towards Bio/CNG Production. Rest is Scrap.
2	**Degradable Waste**	Local Market (Vegetable Market)	Kgs	**5,000**	-	100% is utilised towards Bio/CNG Production.
3	**Cow Dung, Polutry Waste etc.**	Purchase	Kgs	**12,700**	**63,500**	100% is utilised towards Bio/CNG Production.

Packing material Consumption Chart

S.No.	Packing Materials	Provider	Unit	Packing material Per Day		
				Qty(in Nos)	Rate(per kg)	Amount (Rs.)
1	Sacks for Solid Fertilizer	Local Vendor	Nos.	400	50	20,000
2	Sacks for Crushed Glasses	Local Vendor	Nos.	62	50	3,100
3	Sacks for Saleable Plastics	Local Vendor	Nos.	310	50	15,515
4	Jars for Liquid Fertilizer	Local Vendor	Nos.	350	100	35,000
Total Cost of Packing Materials						**73614.82**
***1 Sack has a Capacity upto 25 Kg*						
***1 Jar has a Capacity upto 20 Ltr*						

Production Chart

Production @ 100% Capacity per year						***All amount in Rs.***
S.No.	**Products**	**Per Day**	**Unit**	**Operational Days**	**Production per year in Kgs/ Ltrs**	**%**
1	Bio / CNG Gas	1,084	KGs	**350**	379,400	3.07%
2	Fertilizer in Solid State	10,000	KGs		3,500,000	28.33%
3	Fertilizer in Liquid State	7,000	ltrs		2,450,000	19.83%
4	Scrap	17,220	Kgs		6,027,000	48.78%
Total					**12,356,400**	**100%**

Bifurcation of Scrap Generated

S.No.	Products	Per Day	Unit	Operational Days	Production per year in Kgs	%
1	Glass	1,722.00	KGs	**350**	602,700	10%
2	Paper	5,166.00	KGs		1,808,100	30%
3	Silver	344.40	KGs		120,540	2%
4	Iron, Steel & Tins	861.00	Kgs		301,350	5%
5	Plastic	9,126.60	Kgs		3,194,310	53%
Total					**6,027,000**	**100%**

Assumption

Working days is 350 in a year

Scrap is Generated from Non Degradable waste which is 70% of Total Waste Provided by Nextera Energy Pvt. Ltd.

Out of 70%, 40% is isuued to Land Filling Sites. Therefore, Only 60% of 70% is saleable Scrap.

Sale revenue generation @ 100 % Capacity per year

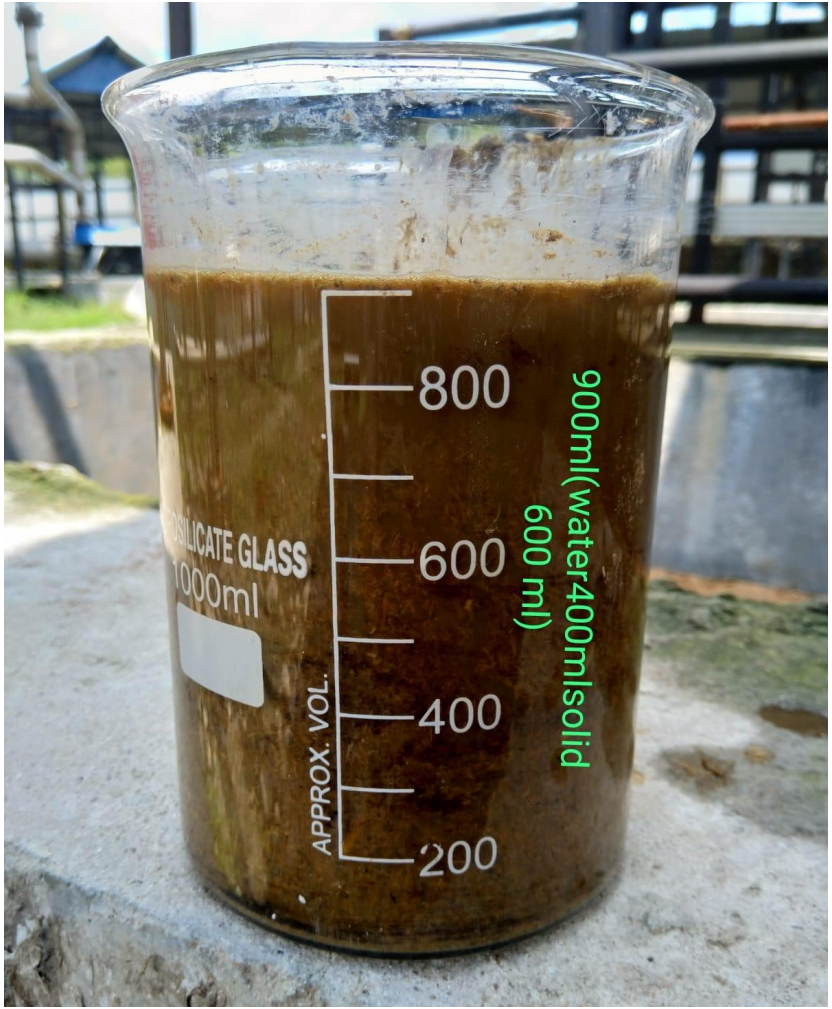
All amount in Rs.

S.No.	Products	Per Year Production	Unit	Rate per Kg/ Ltr	Revenue per year	Revenue per Day	Revenue %
1	Bio / CNG Gas	379,400	Kgs	130	49,322,000	140,920	14.56%
2	Fertilizer in Solid State	3,500,000	Kgs	20	70,000,000	200,000	20.66%
3	Fertilizer in Liquid State	2,450,000	Ltrs	7	17,150,000	49,000	5.06%
4	Crushed Glass	542,430	Kgs	3	1,627,290	4,649	0.48%
5	Egg Tray	16,272,900	Nos	7	113,910,300	325,458	33.62%
6	Silver	120,540	Kgs	170	20,491,800	58,548	6.05%
7	Iron, Steel & Tins	301,350	Kgs	40	12,054,000	34,440	3.56%
8	Plastic	2,715,163.50	Kgs	20	54,303,270	155,152	16.03%
Total					**338,858,660.00**	**968,167.60**	**1.00**

Revenue, Cost and Profit Analysis

Particulars	Sales	Operating Cost	Grant Income	Other Admin and Fixed Cost	Bonus and CSR	Current Tax	PAT	NP%
2080-81	186,372,263	82,029,943	5,822,170	51,952,008	5,821,248	4,618,126	47,773,107	25.63%
2081-82	203,315,196	81,651,000	5,056,799	51,829,275	7,489,172	6,740,255	60,662,293	29.84%
2082-83	220,258,129	81,930,626	4,387,893	51,448,521	9,126,688	8,214,019	73,926,168	33.56%
2083-84	237,201,062	82,771,754	3,817,038	51,012,292	10,723,405	14,476,597	82,034,053	34.58%
2084-85	254,143,995	84,091,792	3,329,202	50,471,042	12,291,036	16,592,899	94,026,428	37.00%
2085-86	271,086,928	85,820,456	2,911,709	49,771,257	13,840,693	24,913,246	99,652,985	36.76%
2086-87	288,029,861	87,897,925	2,553,869	47,367,353	15,531,845	27,957,321	111,829,285	38.83%
2087-88	304,972,794	90,273,279	2,246,656	44,529,565	17,241,661	31,034,989	124,139,956	40.71%
2088-89	321,915,727	92,903,165	1,982,450	40,109,727	19,088,529	34,359,351	137,437,405	42.69%
2089-90	332,081,487	94,054,378	1,754,809	34,918,164	20,486,376	36,875,476	147,501,903	44.42%

Results		
IRR (Internal rate of return)	28%	
NPV of Project at Cost of Capital	185,472,873	Amount in NPR
Pay Back Period -Simple	3.59	Years
Pay Back Period -Discounted at 16%	5.55	Years
Bank Debt Equity Ratio	0.71	
Debt Coverage Ratio	3.29	Avg. of 10 Years
Gross Profit Ratio	67%	Avg. of 10 Years
Net Profit Ratio	38%	Avg. of 10 Years
Return on Investment	46%	Avg. of 10 Years



Break Even Analysis

Particulars	Break Even Point in % Capaicity	Break Even Point in "NRS"
2080-81(Projected)	65%	121,101,113
2081-82(Projected)	57%	115,240,069
2082-83(Projected)	50%	109,699,738
2083-84(Projected)	44%	104,686,453
2084-85(Projected)	39%	100,067,425
2085-86(Projected)	35%	95,703,547
2086-87(Projected)	31%	89,366,686
2087-88(Projected)	27%	82,748,311
2088-89(Projected)	23%	74,159,458
2089-90 (Projected)	19%	64,704,219

Business Model

Key Promoter

Nextera Energy Pvt. Ltd (60%)

Rohan Traders (40%)

Key Activities

Management of Municipal Waste

Production of Bio/CNG Gas, Solid and Liquid Fertilizers, egg tray, plastic processing, glass crushing etc

Key Resources

Waste, Land, Physical Infrastructures, plant and machineries

Human resource, Financial Support

Business Model

Value Proposition

Circular Economy and Resource Efficiency: Biogas industries contribute to the circular economy by turning organic waste into valuable resources.

Carbon Offsetting and Environmental Credits: Biogas industries can earn carbon credits and participate in carbon offset programs

Supply of Organic Fertilizers and Reduction in import of Fossil Fuel

Customer Relationship

Regular Supply of Energy in respect of Commercial Industry

Cost efficiency in respect of End Consumer

Channels

Gas Supply: Through the refilling station

Fertilizers and other allied products through Dealership:

Customer Segments

Household consumers, Brick Industries, Hotels, Private Cars and Auto Rickshaw, Farmers

Cost Structure

- Royalty to Municipality
- Raw Material Procurement Cost
- Production Overhead
- Admin Cost
- Selling and Distribution Cost

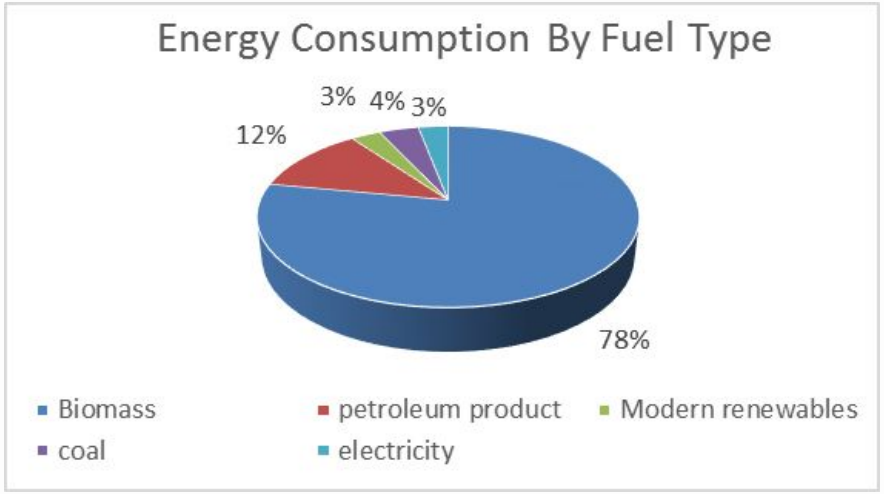
Revenue Streams

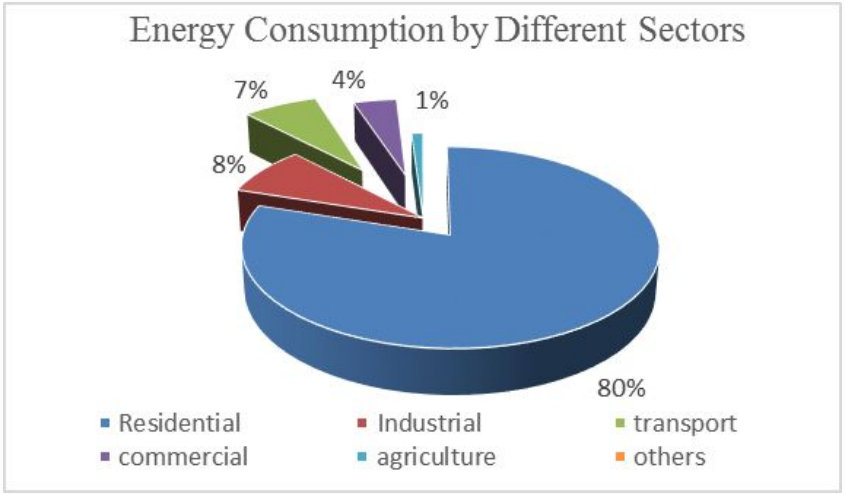
- Bio/CNG
- Fertilizers in Solid & Liquid State
- Crust Glasses
- Egg Tray and Processed Plastic
- Iron, steel, tin silver etc

Strategic Planning

Overall Market Size:

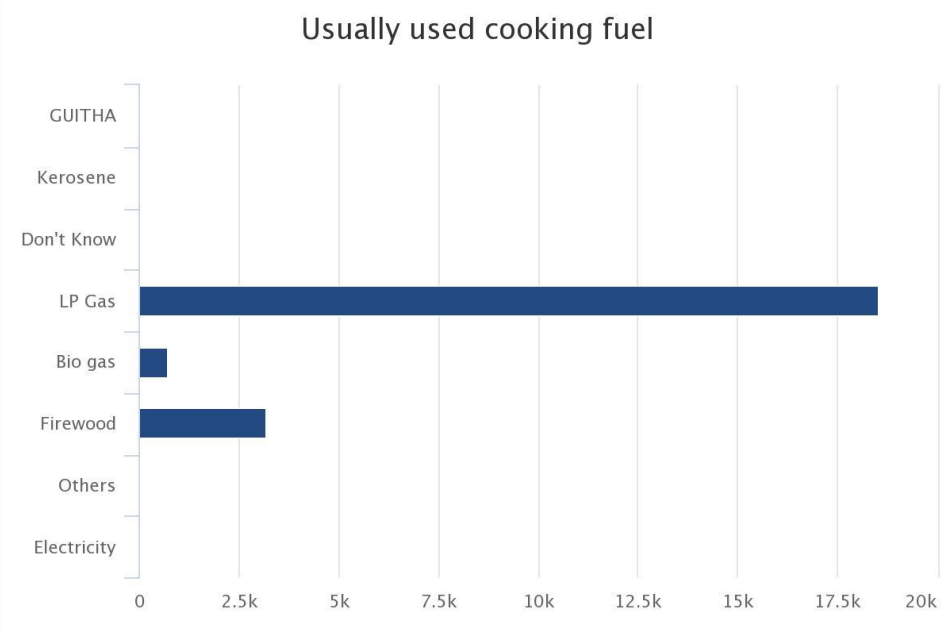
Energy crisis, biomass energy covers around 78%
80% of energy consumes in residential sector, mainly cooking
Burning of biomass causes INDOOR air pollution and inefficient due outdated technology

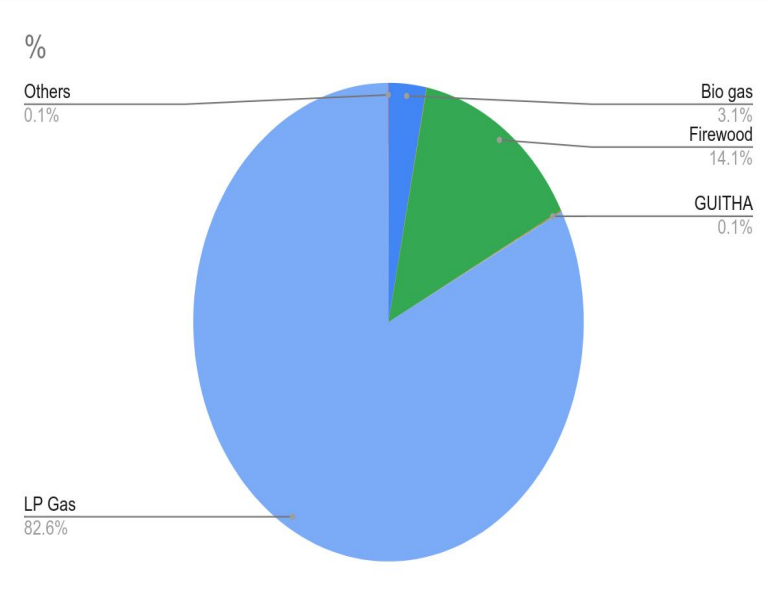




Source: Economic Survey

Market size of Damak





Marketing

Personal Marketing (Networking): This business will have main focus on wholesaler or distributor and fertilizers depot. They are are bridge between ultimate clients to our business
Print, FM and Television media: Marketing through local FM, print media and Television
Social Media Marketing
Billboards, Brochure, Banners e.t.c

SWOT MATRIX

INTERNAL FACTORS

STRENGTHS +

- \+ Abundant Organic Waste
- \+ Renewable Energy Potential:
- \+ Government Support:
- \+ Waste Management Solution

WEAKNESSES –

- — Initial Investment Costs
- — Technical Expertise
- — Lack of Awareness
- — New market Segment

EXTERNAL FACTORS

OPPORTUNITIES +

- \+ Increasing Demand for Energy
- \+ International Funding and Collaboration
- \+ Lucarative profit margin
- \+ Unexplored market Segment

THREATS –

- — Unstable Government
- — Infrastructure Limitations
- — Increase in Cost of Fund
- — Inflation

For Detailed Financial Feasibility Report Click Here

Thank You!!

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Presentation

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