

Punjab Renewable Energy Systems Pvt. Ltd. Operations during Covid-19

Difficult things we do immediately, impossible takes a little longer

Introduction

PRESPL commenced its operations in March 2011 and is the first company in the organized sector of biomass aggregation & supply in India. PRESPL has successfully supplied Biomass to Biomass IPPs, Captive & Co-Generation Power Plants, provided structured commercial guarantees for fuel quantity & quality (GCV, ash, moisture ,etc.) to the end customer over long term period. PRESPL has served more than 25 biomass power & process plants and has supplied more than 4,00,000 MT of various biomass.

PRESPL has been awarded as Most Innovative Company in Renewable Sector by Power Today Magazine and the selection has been done by PwC.

International Equity fund [responsAbility](#) invested in the Equity of PRESPL in Sep 2013 during the Series 'A' fund raise.

Equity fund [SBI NEEV](#) (SBI, SBI Caps & DFID UK) invested in the Equity of PRESPL in Apr 2019 during the Series 'B' fund raise.

Strategic Investment in equity by [Shell Ventures B.V](#) as Series 'B' in Aug 2019.

Part 1: Operation of the 13 TPH Biomass Boiler

Project: Build Own Operate & Transfer Project for delivery of India's 1st 100% Raw Biomass Fired Boiler

Site: Sun Pharmaceuticals Ropar, Punjab

Status: Commissioned & Operational since 20 Mar 2020



PRESPL has successfully commissioned on the 20th March 2020, the first of its kind 100% Raw Biomass Fired Boiler in India, for steam generation and sale of energy on a steam purchase agreement (akin to a PPA) for a 10 year tenor.

The project has been funded by IREDA Limited as one of the first, with support from the Ministry of New & Renewable Energy (MNRE) Government of India which recognised steam energy produced from renewable sources such as Biomass as renewable energy and supported this project with new schemes & funding, through an excellent investment structure for the renewable energy industry.

Construction Phase of the project was led by Colonel Sumeet Malhan SM (Retd), CTO PRESPL (sumeetmalhan@prespl.com)

Key Highlights:

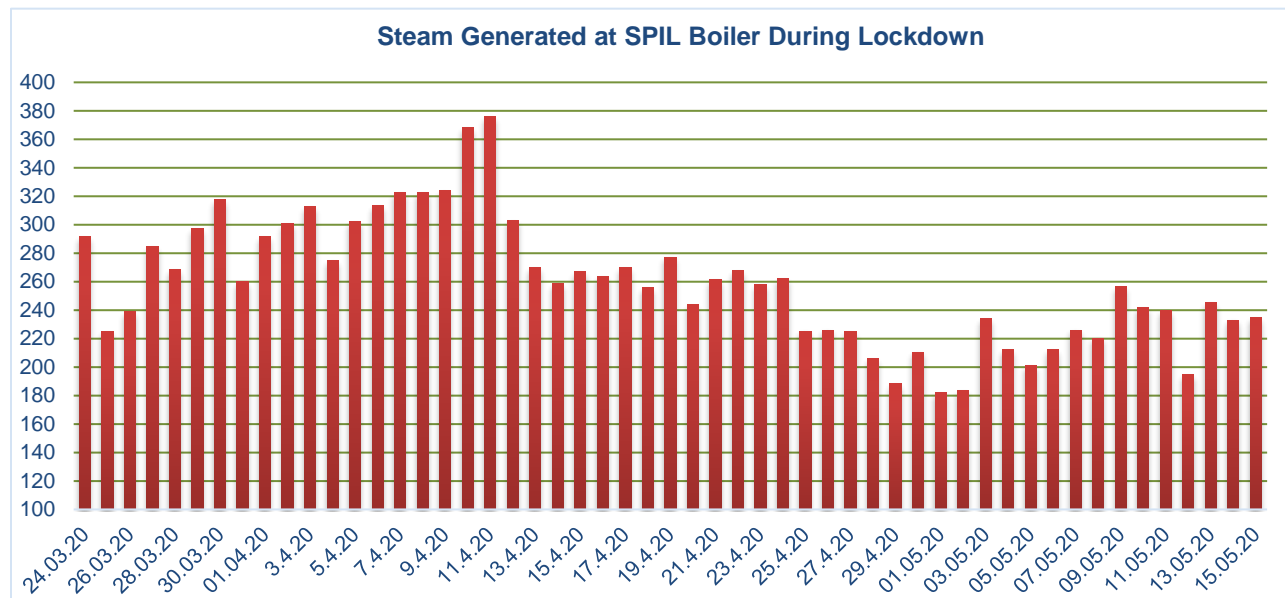
Designed & Manufactured in India under the “Make in India” self-reliance programme by the Forbes Marshall Group, indigenous technology and support partners to PRESPL, for all these BOOT projects.

Project delivered 70 days in advance within financial budgetary allocations owing to efficient integrated-planning and dynamic scheduling, meeting all project milestones within stipulated timelines. Operationalized on 20 Mar 2020 against the scheduled project deadline of 31 May 2020.

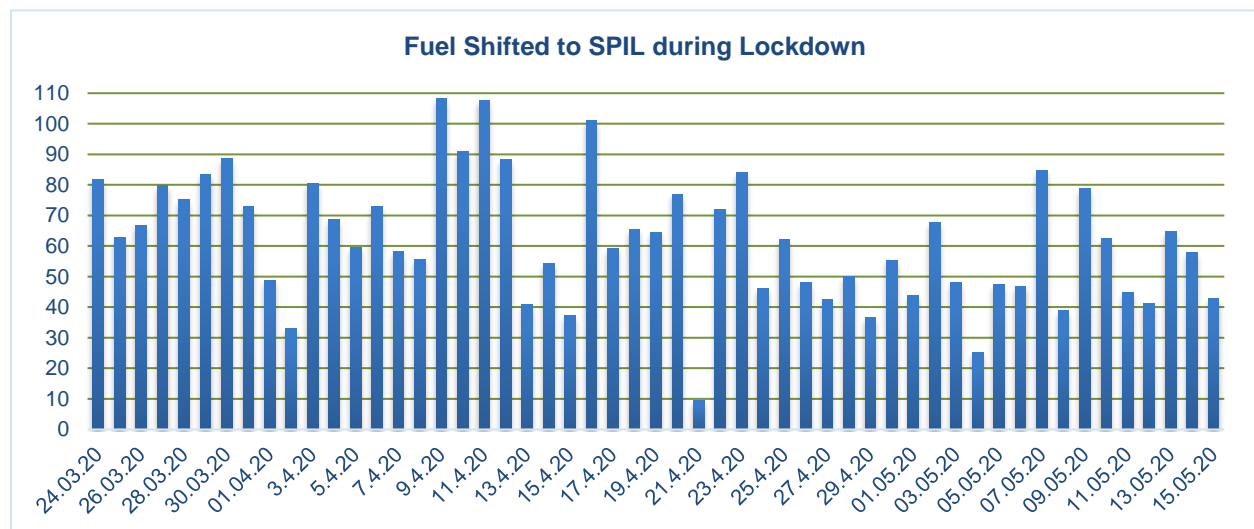
1 Million Man-Days engaged, 3000 Tons of Earth & Material moved. *ZERO incidents, injuries & accidents recorded balancing both speed of execution and safety of men & material.*

The boiler has been in continuous operation since 20 Mar 2020 and has clocked 100% uptime. The plant has been running almost to its full steam generation capacity @11 TPH, without any break during the covid-19 induced lockdown The plant has clocked nearly 1500 hours from 28 March 2020 till 15th of May 2020 and mostly pandemic period with constraints of manpower and through challenging yet effective supply chain management issues.

15000 Tons of Steam supplied.



4000 Tons of biomass fuel delivered at site in 60 days so far. 90% of Biomass fuel demand was met in-house by PRESPL through its fuel Aggregation Yard where 30 days fuel reserves had already been created prior to the sudden suspension of fuel supply chains due to curfew/lockdown.



The minimum savings for the client for the price of biomass based energy compared to fossil fuel is expected to be ~40%. As is evident from the table below, steam energy produced from Biomass is financially beneficial upto the lower price band of Rs.18.

FO Price	Steam cost on FO	Steam Cost on Biomass	Profit/Loss FO vs Biomass	%
Rs/Litre	Rs/MT	Rs/MT	Rs/MT	
18	1211	1250	-39	-3%
19	1279	1250	29	2%
21	1413	1250	163	12%
23	1548	1250	298	19%
25	1682	1250	532	32%
27	1817	1250	627	35%
29	1952	1250	722	37%
31	2086	1250	816	39%
32	2153	1250	863	40%
33	2221	1250	911	41%
34	2288	1250	958	42%

During the operations over the last 60 days, the plant has generated a revenue of about INR 2 Cr. The operations have not only been successful, but also financially profitable despite serious disruptions of fuel supply chains due to which the plant is operating on costly substitute secondary fuels. Keeping th NATION FIRST, these additional costs have been unilaterally absorbed by PRESPL without passing on any additional burden to the client.

Commissioning, Commercial Operations of the Plant has been under the supervision of Commander Gurkeerat Sekhon (Retd), Sr Vice President North Zone PRESPL (gurkeerat@prespl.com)

Part 2: Operation & Maintenance of Two 15 TPH Biomass Briquette Boilers

Project: Supply of Steam through Two 15 TPH Biomass Briquette Fired Boilers

Site: PepsiCo India Holdings Channo, Punjab

Status: O&M being provided since 25 Jan 2019

PRESPL is engaged to Operate & Maintain 2 Forbes Vyncke make 100% Biomass Briquette Fired Boiler for steam generation and sale of energy on a steam purchase agreement (akin to a PPA) to the client. PRESPL is committed to provide 360° solution ranging from supply of biomass briquettes to generation & sale of steam including maintenance of the boilers, utilities and associated auxiliaries.

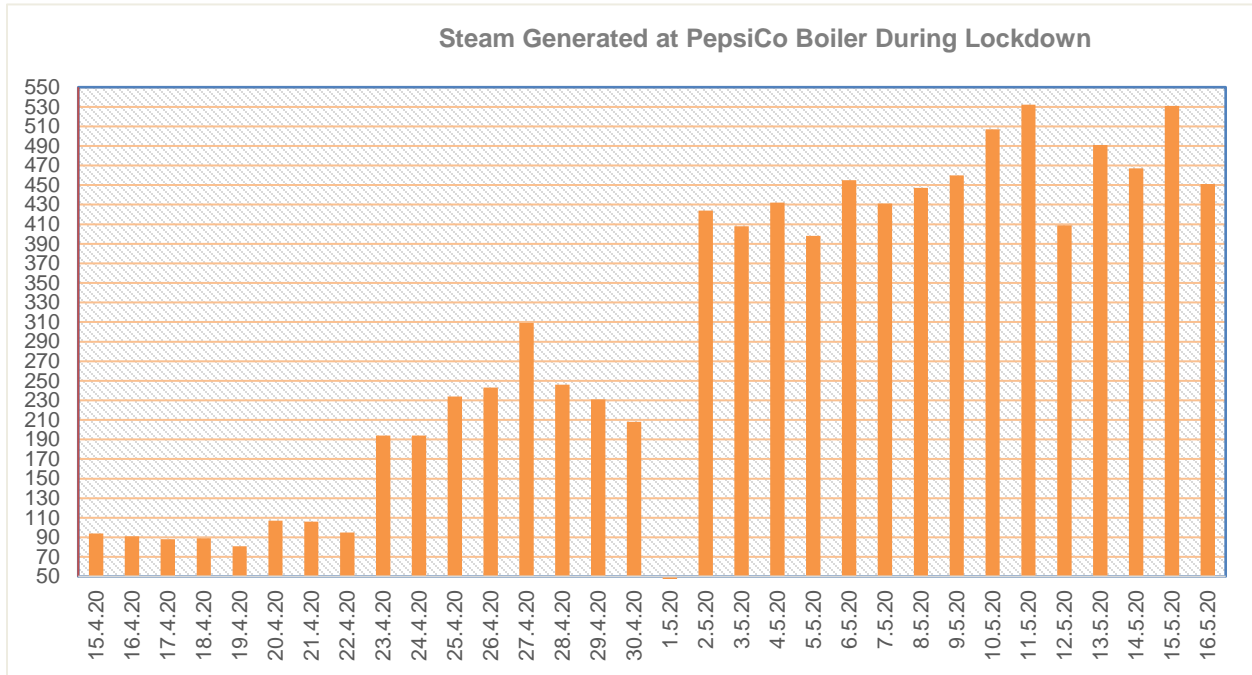


Key Highlights:

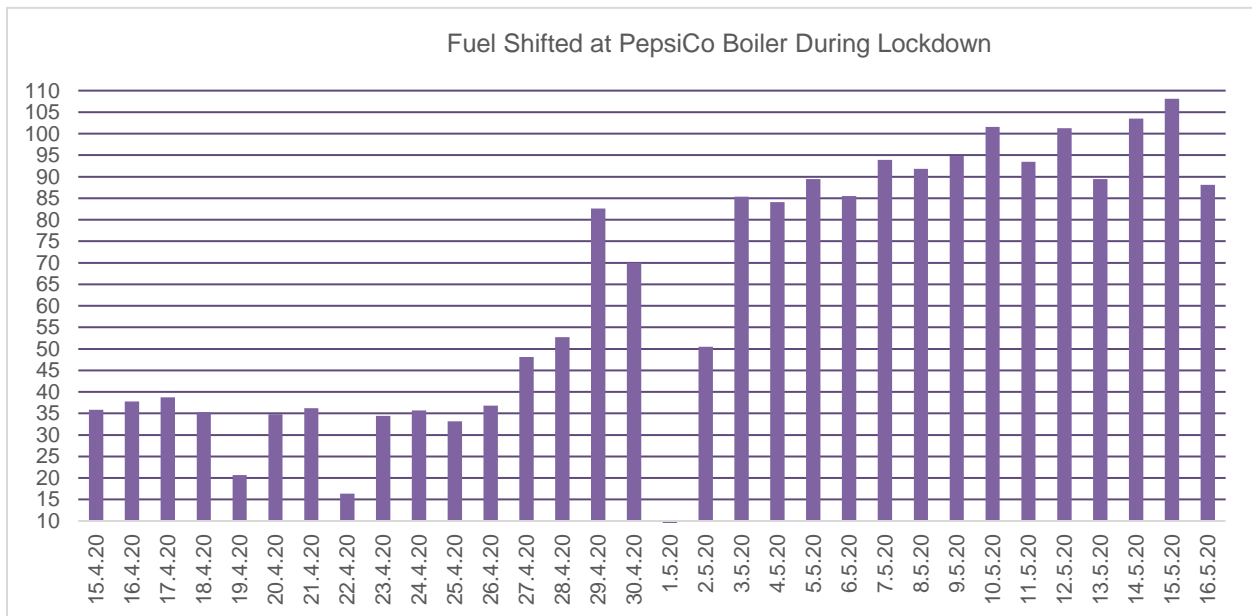
Plant re-operationalized on 14 Apr 2020 after government permitted manufacturing of food items under essential commodities.

The boilers have been in continuous operation since 14 Apr 2020 and have clocked 98% uptime. The plant has been running almost to its full steam generation capacity @24 TPH w.e.f May 20, without any break during the Covid induced lockdown The plant has clocked nearly 750 hours from

14 Apr 2020 till 15th of May 2020 and mostly pandemic period with constraints of manpower and through challenging yet effective supply chain management issues.
 9000 Tons of Steam supplied,



2000 Tons of biomass briquettes fuel delivered at site in 30 days so far. 90% of Biomass fuel demand was met in-house by PRESPL through its fuel Aggregation Yard where 30 days fuel reserves to the tune of 4000 Tons are always maintained to cater for such eventualities.



During the operations over the last 30 days, the plant has generated a revenue of about INR 1.2 Cr. The operations have not only been successful, but also financially profitable despite serious disruptions of fuel supply chains.

As can be seen from the table below, minimum savings for the client for production with steam every produced from Biomass briquettes compared to that using diesel fuel is expected to be 60%.

Diesel Price	Cost of Production on Diesel	Steam Cost on Biomass	Cost of Production on Biomass	Profit/Loss Diesel vs Biomass	%
Rs/Litre	Rs/MT	Rs/MT	Rs/MT	Rs/MT	
60	16800	1340	6566	10234	61%
62	17360	1340	6566	10794	62%
64	17920	1340	6566	11354	63%
66	18480	1340	6566	11914	64%
68	19040	1340	6566	12474	66%
70	19600	1340	6566	13034	67%

Commercial Operations of the Plant has been under the supervision of Commander Gurkeerat Sekhon (Retd), Sr Vice President North Zone PRESPL (gurkeerat@prespl.com)

Weathering the storm

In a stark contrast to the overall economic scenarios, state of similar sized businesses and even considering the fate of corporations deemed too big to fail, PRESPL is successfully weathering the storm. We proudly stand with our team members with ZERO layoffs, ZERO pay-cuts & ZERO attrition.

Adopting stringent EHS, personal safety and social distancing norms helped PRESPL operate during the painfully long lockdown without a single incidence of viral infection. This was successfully achieved by adopting a company-wide 3 Pronged Strategy:-

1. Identification of Key Personnel for minimum staffing & watch-keeping duties for reducing engaged manpower and improving social distancing. These key resources were deployed in an extended 2 watch routine where they have performed with extraordinary professionalism.
2. Arranging for Lodging & Boarding of these resources within or in close proximity of the site for refined travel and lowering the odds of exposure. These arrangements are made by the PRESPL Management for the comfort and well-being of the resources. These measures also instilled confidence in their families during these testing times.
3. Implementing and enforcing enhanced personal and social hygiene etiquette.

All additional costs, due to the adverse affects of the lockdown have been unilaterally absorbed by PRESPL without passing on any to the clients.

What's noteworthy is the fact that almost entirely the operational time has been during the Covid-19 induced lockdown, testing the boiler plant & machinery, fuel supply chain efficiency & robustness and mental resolve of the operations & maintenance team to their limits. Proudly, PRESPL came out on top when it was mandated by the authorities to keep the plant running for manufacture of life saving medicines during the Pandemic.

SWOT Analysis as Part of Key Learnings while Operating through Covid-19

Strengths

PRESPL was able to operate the boiler under its commission and deliver steam during these extraordinary circumstances proving that it is PEERLESS in the 360° Biomass handling space
Proactive interactions with OEMs through videoconferencing for resolution of technical issues led to quality and timely response to operational defects

Having realised the potential, PRESPL is now the front runner for strategic partnerships in the field of renewable energy to be FUTURE READY

PRESPL didn't become too dependent on projections while the financial markets brought in great uncertainty. Wide range of scenarios were explored to keep operations financially stable. Did not allow the financial market directions to cloud the judgement about the business

Planned for the best while prepared for the worst. Kept in mind that recovery is the possible but didn't let that insight make ourselves complacent

Began to look past the crisis, evaluated opportunities and challenges which will arise

Direct contribution to society and the nation

Opportunities

PRESPL will continue to CHALLENGE THE STATUS QUO and will protectively seek improvements in all spheres of operations.

Better capacity utilisation and capacity development.

Risk assessment and mitigation planning.

Renewed focus on client confidence.

Structured framework for creation of IP the field of renewable energy and resource management.

Skilled manpower is key and necessary skill set & expertise has no substitute.