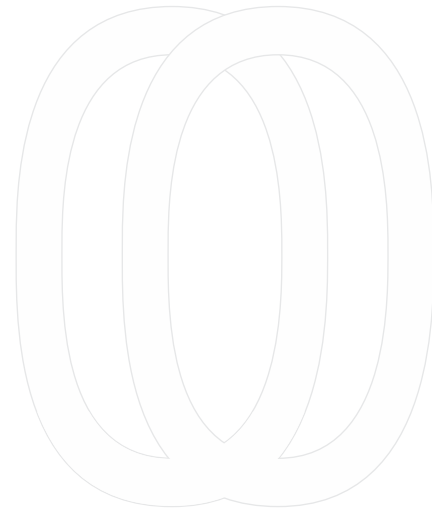




**GLOBAL
NETWORK
FOR ZERO**

Net Zero Energy Assessment Report



**Empowering people and organizations to accelerate
the realization of a zero emissions world.**

SRK HOUSE

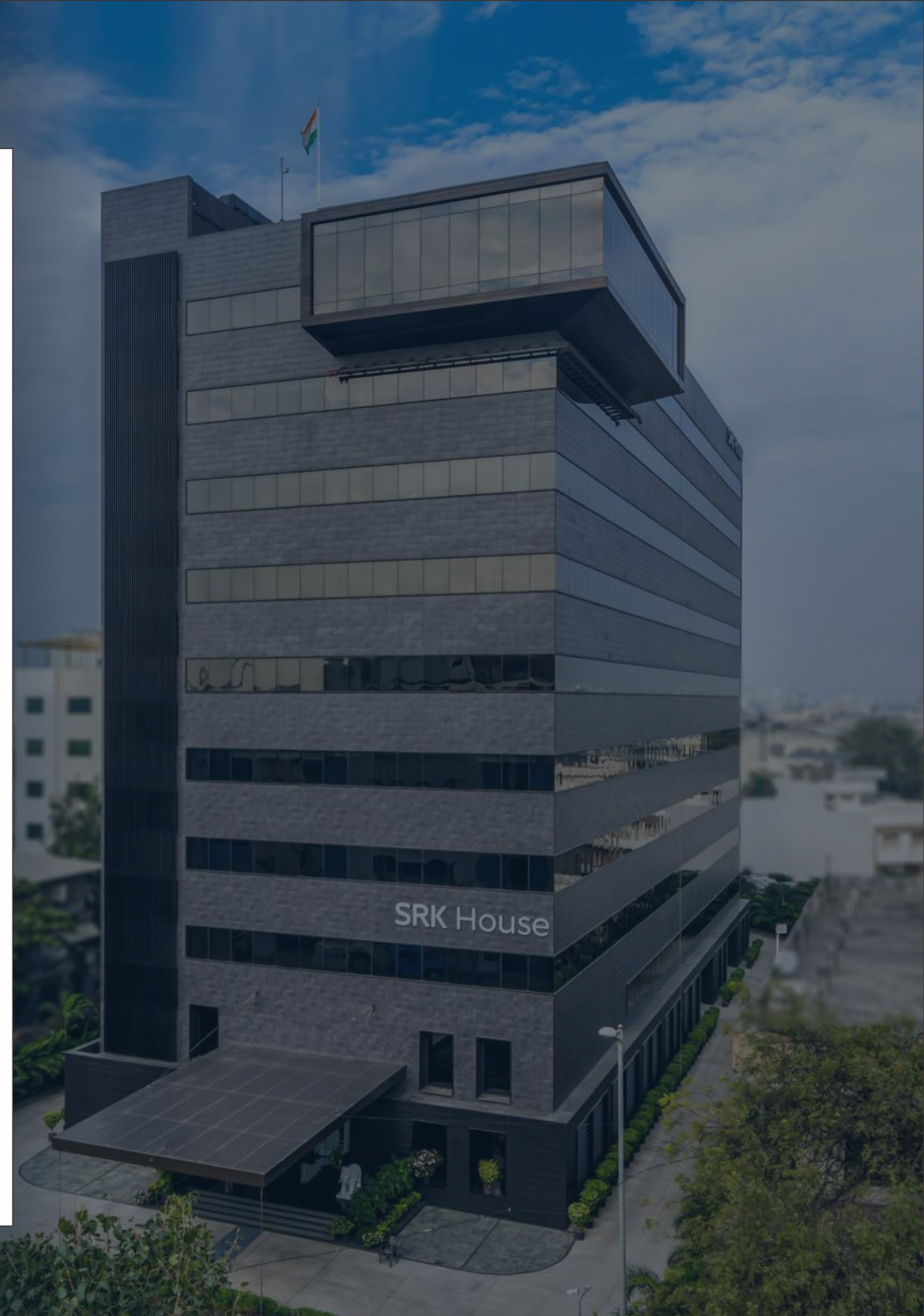
Shree Ramkrishna Exports Pvt. Ltd.
SRK House, 112, Katargram – Amroli Road, Katargram,
Surat – 395004, Gujarat, India

Net Zero Energy Assessment Report

Reporting Period:
01-Apr-2023 to 31-Mar-2024

Report Date:
18-Jun-2024

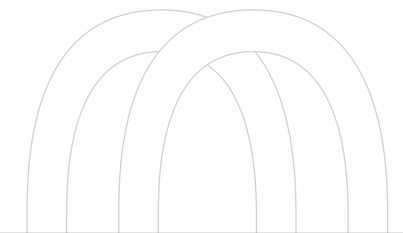
Assessment Conducted by





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SRK



SRK HOUSE is a
World's 1st

NET ZERO

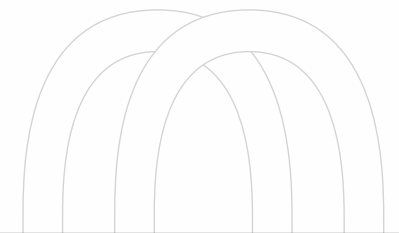
Certified Natural Diamond Crafting Facility



1. Executive Summary

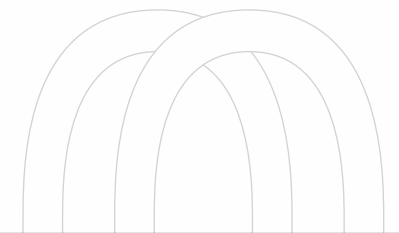


The Global Network for Zero (GNFZ) is the world's premiere independent net zero certification body. GNFZ provides independent, third-party net zero certification for buildings, businesses, communities, cities, products, processes and more. Shree Ramkrishna Exports Pvt Ltd (SRK), one of the most sustainable diamond crafting companies in the world, is the first company in the world to pursue and meet GNFZ's Net Zero Energy for its two flagship crafting facilities: SRK House and SRK Empire.



This Net Zero Energy Assessment Report analyzes all of the energy requirements (in terms of kWh or kilowatt-hour) due to the various business activities performed at SRK House during the period April 1, 2021 to March 31, 2024. The objective of this assessment is to validate that the energy consumption at SRK House meets the requirements from renewable energy sources to qualify for GNFZ's Net Zero Energy certification and to determine opportunities and outline necessary action plans required to sustain the net zero energy status.

GNFZ would like to thank SRK for entrusting us with the task of conducting this assessment and congratulate SRK on achieving Net Zero Energy certification at SRK House. We would also like to thank all the team members at SRK for their cooperation and support in conducting this assessment and contributing to the sustainability goals by adopting climate change mitigation practices.



The total energy consumption reported at SRK House is presented in the table below.

Table 1: Summary of Energy Consumption

Year	Total Electrical Consumption (Billed)	Total N Gas Consumption (Billed)	Total Equivalent Energy Consumption (Billed)
	kWh	kBtu	kWh
2021-22	25,66,800	7,45,311	27,85,238
2022-23	23,40,165	6,70,417	25,36,653
2023-24	22,19,460	5,51,646	23,81,138

In pursuit of GNFZ's Net Zero Energy certification, SRK's management decided to replace the overall energy consumption at SRK House with renewable energy sources. A solar plant has been commissioned as per the details below:

- **Phase 1** – 2400 kW DC ground-mounted solar plant at Akala, Amreli, Gujarat vide PO no. SRD/PO/SUR/SP/20230427 dated April 27, 2023

Further details and documentation are provided in the following report.





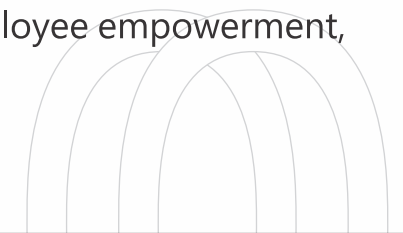
2. Introduction

Founded by Shri Govind Dholakia in 1964, SRK is one of the world's leading diamond crafting and exporting conglomerates. Valued at nearly US \$1 billion, SRK employs over 6,000 people and has played a pivotal role in transforming India's contribution to the global economy over the last six decades. With an unwavering pursuit of perfecting all aspects of diamond crafting, SRK has proved time and again its commitment to serving the planet and to building a better India and beyond. A purpose driven organization committed to what it calls 'PURE' trust, transparency, and tenacity, SRK is leading the gems and jewelry industry to prioritize sustainable practices, compliances, and shedding light on the urgent and necessary acceleration efforts for a zero emissions India and beyond.

SRK is committed to delivering high-quality products that meet the expectations and requirements of its clients. The company also strives to adhere to the highest standards of ethics, transparency, and social responsibility in its operations. SRK believes that sustainability is not only a goal but also a way of life.

SRK's approach to diamond artistry combines pure science with meticulous craftsmanship, ensuring that each diamond is cut to perfection by over 4,000 master artisans. The SRK Grading System (SGS) exemplifies the company's transparency, offering a refined 20-step process to authenticate the true value of a diamond, surpassing the traditional 4C evaluation. SRK's vision extends beyond crafting exquisite diamonds; it encompasses a deep-rooted purpose to contribute positively to society and the environment.

SRK's commitment to ethical practices is deeply ingrained in its corporate philosophy, which is centred around the principles of environmental, social, and governance (ESG). The company's dedication to conducting business in a safe, ethical, and sustainable manner is evident in its comprehensive approach to corporate social responsibility (CSR). SRK's initiatives extend beyond the traditional scope of business, focusing on community welfare, employee empowerment, and environmental stewardship.



One of the key aspects of SRK's ethical practices is its unwavering commitment to education and healthcare. The company has made significant contributions to community welfare, with initiatives that have impacted millions of lives. SRK's philanthropic arm, the SRK Knowledge Foundation (SRKKF), has been instrumental in advancing education and healthcare, thereby fostering community development and well-being.

In terms of environmental responsibility, SRK has taken bold steps towards sustainability and decarbonization. The company's net zero goals are aligned with the United Nations Sustainable Development Goals (UN SDGs) and the Science-Based Targets Initiative (SBTi).

SRK's ethical sourcing is another cornerstone of its practices. The company has pioneered 'The Footprints', a traceability feature that ensures ethical sourcing by tracing diamonds to their Country of Origin. This initiative not only guarantees the integrity of the supply chain but also promotes responsible consumption patterns.

Moreover, SRK's commitment to ethical practices is reflected in its adherence to the highest standards of professional conduct. The company's anti-bribery compliance policy meets the strictest requirements of global laws, ensuring that integrity and trust remain cornerstones of its operations.

The company's socio-economic investments are a testament to its dedication to making a positive impact on society. SRK has consistently contributed a significant portion of its net profit to community welfare projects. These projects range from healthcare initiatives benefiting millions to substantial investments in solar projects, which include providing solar panels to employees and local communities.

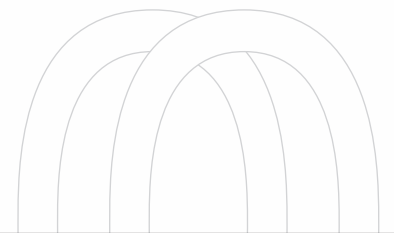
Furthermore, SRK is a certified member of the Responsible Jewellery Council (RJC), a member of the United Nations Global Compact (UNGC), and actively participating in task forces to promote alignment with UN SDGs in the diamond sector. SRK's ethical practices are a holistic blend of social responsibility, environmental stewardship, and corporate governance. The company's initiatives in education, healthcare, sustainability, and ethical sourcing demonstrate a purpose-driven organization committed to creating a positive and lasting impact on both people and the planet.

SRK House – Vision in Action

SRK has established itself as a leader in the field, offering a journey of authenticity and luxury through its diamonds. The company's dedication to quality and ethical sourcing is reflected in its state-of-the-art facilities. This vision is perfectly embodied at SRK House, which is not only one of the largest facilities in the industry, but also a testament to technological advancement and environmental responsibility.

One of the highest performing LEED certified buildings in the world (Platinum – at 96 points), SRK House was also the first building in the world to achieve GNFZ's net zero certification for existing buildings, reflecting the company's ethos of luxury intertwined with responsibility. SRK has undertaken several measures towards sustainability at SRK House to ensure the highest levels of sustainability and operational performance.

SRK House and SRK Empire are the first GNFZ certified buildings in the world



3. Scope and Boundary

a) Physical site location:

Shree Ramkrishna Exports Pvt Ltd (referred to as “SRK House” throughout this report)

Plot No.-SRK House, 112 Katargram-Amroli Road, Katargam, Surat-395 004, Gujarat, India.

Location: <https://maps.app.goo.gl/gXCdzZ1x7XjtuP1G9>

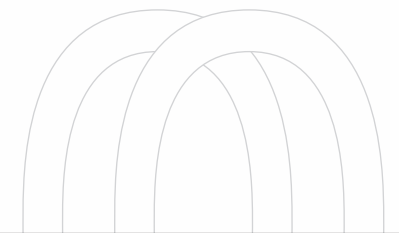
Project area: 1,05,078 ft²

Occupancy: 2000+

b) Project activities:



SRK has evolved over six decades into a globally trusted entity, recognized for its consistent supply of high-quality polished diamonds across all shapes and sizes. SRK's vision is to maintain its position as the world's most trusted supplier of premium, certified diamonds, while its mission focuses on achieving excellence with a mindful approach to the environmental and societal impacts of its business.

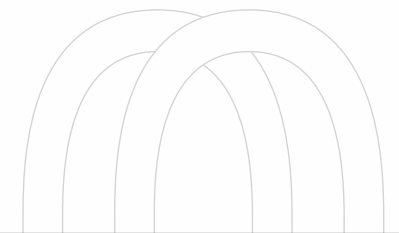


The company's state-of-the-art facility in Surat is equipped with advanced technology and systems, capable of producing an impressive 10,00,000 carats annually. With a workforce exceeding 6,000 skilled individuals, SRK boasts of having one of the best infrastructures in the industry, including innovative systems like the Sarin Planner Machines and a customized in-house grading system, the SGS. This commitment to craftsmanship and innovation is further evidenced by the company's numerous ISO certifications and its recognition as the most compliant company in the diamond industry.

The company's direct contracts for rough diamond purchases from major mining giants like De Beers, Burgundy Diamond Mines Ltd., and Rio Tinto, along with its participation in the United Nations Global Compact (UNGC), demonstrate its commitment to responsible sourcing and sustainable practices.

Moreover, SRK is associated with prominent industry associations such as the World Diamond Council (WDC), Responsible Jewellery Council (RJC), the U.S. Green Building Council (USGBC), Natural Diamond Council (NDC), and Gems and Jewellery Export Promotion Council (GJEPC). Its role as a preferred crafter for Canadamark and Forevermark diamonds, known for their distinctiveness and responsible sourcing, further solidifies its reputation in the market.

In addition to its diamond crafting expertise, SRK is also recognized for its transparent and stringent grading process, the SGS, which goes beyond the traditional 4C evaluation to authenticate the true value of a diamond. The company's traceability feature, 'The Footprints,' launched in 2019, allows customers to discover the journey of their diamonds from the mines to their hands, ensuring pure traceability and transparency.



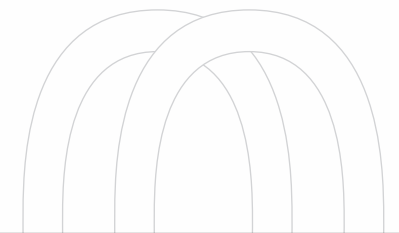
SRK's approach to luxury and craftsmanship is not just about producing exquisite diamonds; it's about understanding and fulfilling the emotional drivers of consumers. The company's jewellers are adept at turning inspiration into objects of desire, crafting each piece with precision and artistry. This blend of pure art and science in diamond crafting positions SRK as a leader in the industry, committed to delivering authentic quality and luxury to its clients worldwide.

c) Data applicability:

The estimation of energy performance considers all the operational activities by SRK at SRK House at the physical site location mentioned above. Energy performance for the diamond crafting process as defined in project activities is included.

d) Types of Energy Use:

- a. a. Two energy sources are used at SRK House – electricity and piped natural gas. The further energy use is bifurcated as per the following figure.
- b. The energy performance incorporates at minimum the following requirements for energy use and consumption of the facility:



I. Building operation requirements

1. HVAC & chiller system
2. Air handling Units and Fan (exhaust, fresh air, other)
3. Computer – office works
4. Cooler
5. Lift
6. Lighting – indoor & outdoor area
7. Kitchen requirements (equipment)
8. Water pumping
9. Plug load

ii. Process requirements include diamond crafting equipment and other supporting loads depending upon diamond productions

1. Compressor
2. Work machines
3. Heaters
4. Lighting - task



- iii. External transfer or external supply
 1. Consumption for other energy-consuming equipment installed at the adjacent facility which is outside of the boundary and excludes from the scope of certifications.
 2. This load corresponds to the outside of the LEED project boundary and excluded from the scope of ISO 50001-2018 requirements.

- c. The strategies outlined in this method focus on the energy use & consumption caused by the daily operations and apply to all "SRK House" activities and are to be followed by employees, service providers, and all occupants, at the physical boundary, as applicable. Occupant and contractor education is essential for implementing this method and will be conducted and used by "SRK House" for compliance.

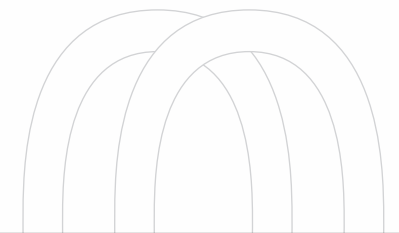
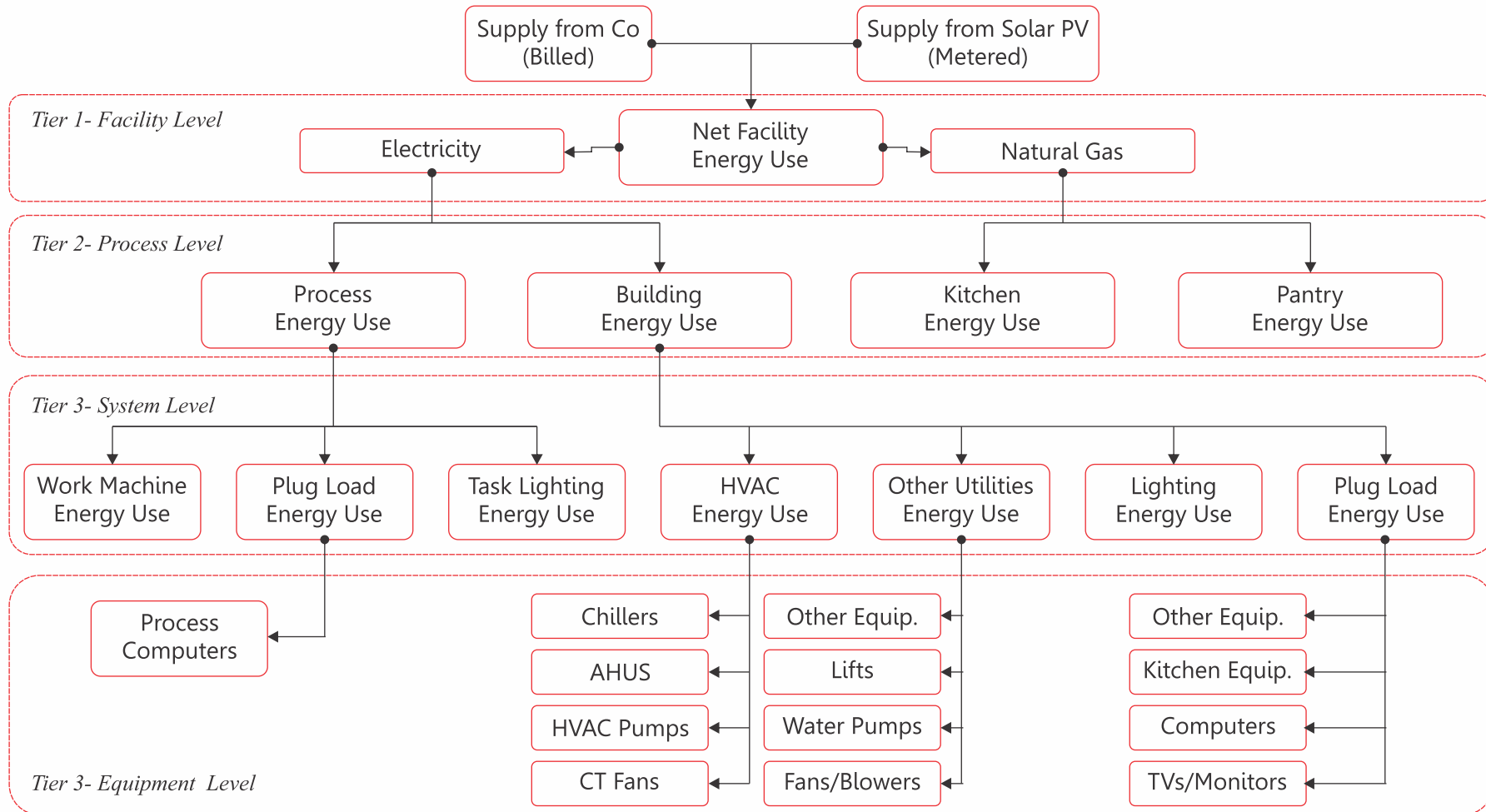


Figure 1 : Energy Use Details





4. Commitment

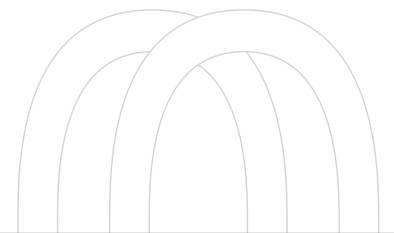
Net Zero Energy certification balances the energy produced at a building with the amount consumed, effectively reducing a building's net energy usage to zero. This ambitious goal is crucial for combating climate change and involves a comprehensive approach to energy production and consumption. It requires transitioning to renewable energy sources, such as wind and solar, and the implementation of energy-efficient practices across various sectors, including transportation, industry, and residential areas.

Committing to this also encompasses leveraging new technologies and infrastructures, such as smart grids and electric vehicles, which are essential for a sustainable energy future. Governments, businesses, and individuals around the world are increasingly recognizing the importance of net zero energy as a step towards a more resilient and environmentally friendly planet.

By striving for Net Zero Energy certification at SRK House, SRK has committed to create a cleaner, more sustainable world for future generations. SRK strongly believes this is feasible and offers various compliances towards more resilience and sustainability. This can be achieved by setting out to ensure the operations of SRK House to net zero energy standards with the following targets.

All the energy consumption at SRK House is to be mitigated for 100% of activities from renewable energy sources by 2024.

All the Scope 1 and Scope 2 emissions at SRK House is to be mitigated for more than 95% of activities from renewable energy sources by 2024.





ELECTRIC
PANEL



5. Inventory Management

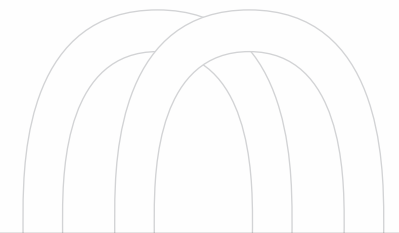
The basic requirement to estimate energy performance is data related to all the activities that can have or can impact energy performance. It is important to ensure the data collection with higher assurance levels, considering the appropriate frequency and periods to estimate energy performance. The following are some important requirements for data collection.

1. Data Accuracy:

- a. All the data required for energy consumption estimation as defined in the scope and boundaries are taken from utility bills or invoices. However, monthly invoices are provided as appropriate and annexed to establish traceability and to ensure verification and validation requirements.
- b. All the data, required for the estimation of energy consumption includes all the energy sources applicable to the defined scope and boundary.

2. Data Adequacy:

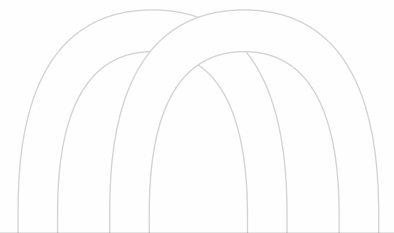
- a. Electricity data – Data adequacy is ensured by taking the invoices from the service provider that include appropriate information for example actual demand, power factor, time-of-day usage, night-hour usage, hourly load profile or set-off period data. This helps in estimating the set-off requirements from net energy generated and consumed for the specific period.



- b. Electrical consumption is available for all the months related to the baseline and reporting period. All the figures mentioned are supported by monthly utility bills from Torrent Power Limited (TPL) and monthly records are kept to ensure the adequacy of the data and to determine the opportunities related to net zero energy requirements every month.
- c. Piped natural gas consumption is available for all the months related to the baseline and reporting period. All the figures mentioned are supported by monthly utility bills from Gujarat Gas Limited (GGL) and monthly records are kept to ensure the adequacy of the data and to determine the opportunities related to net zero energy requirements every month.

3. Data Applicability:

- a. It is important to apply available and adequate data to estimate baseline energy consumption and determine additional opportunities related to the availability and adequacy of the data, to improve on reporting and mitigating appropriate energy consumption for SRK House's activities.
- b. Ensuring appropriate applicability of the relevant data also defines the confidence levels and improves assurance levels of the reporting including verification and validation of the data.



4. Data Appropriateness:

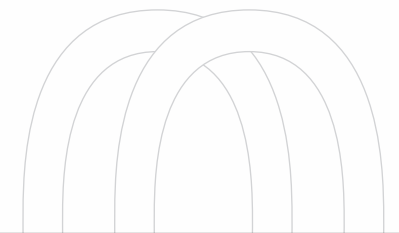
- a. Submitted details and supporting evidence ensure that energy consumption details are appropriate.
 - i. A monthly breakup is provided
 - ii. All the details are supported with appropriate evidence

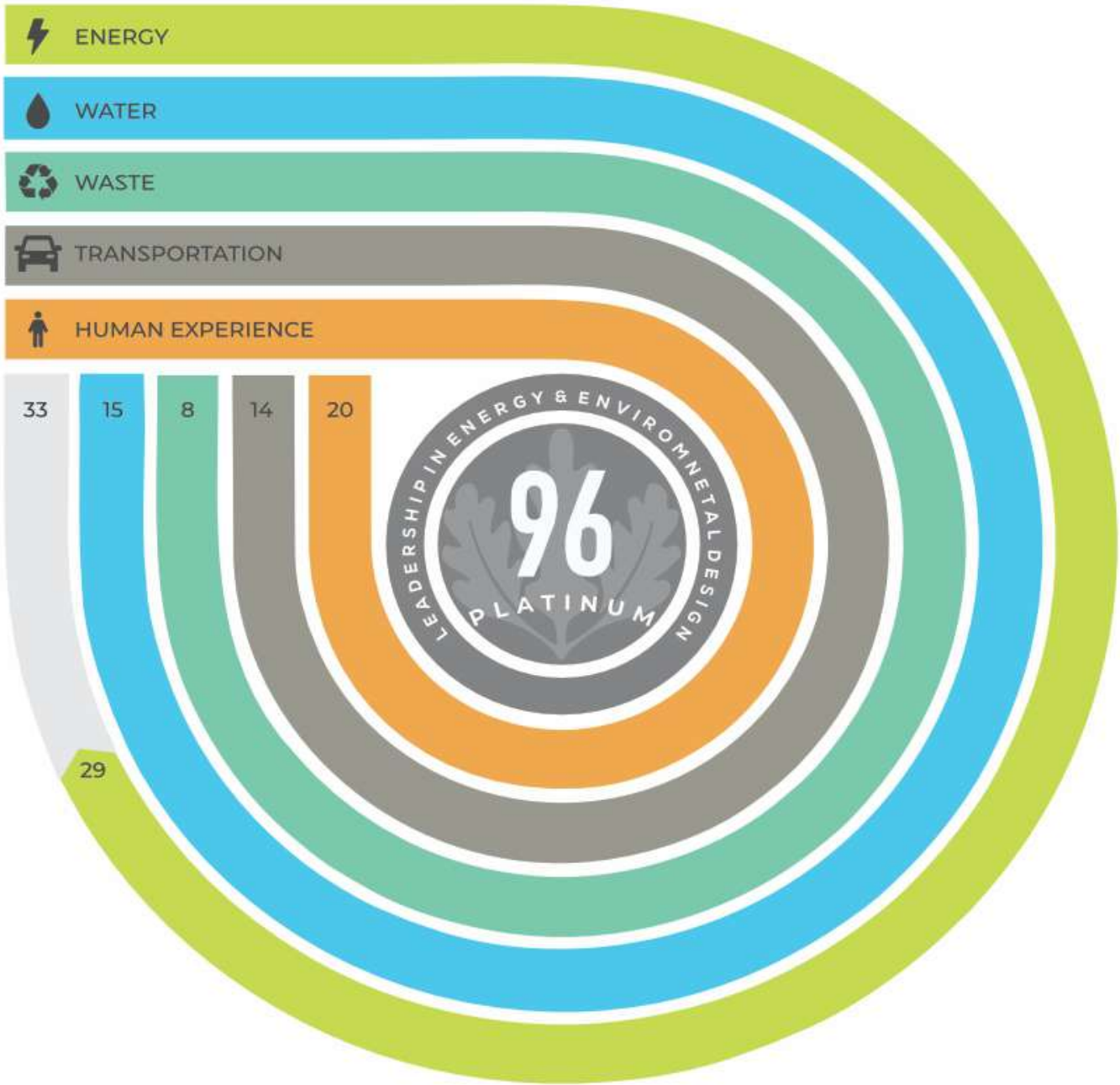
5. Data Availability :

- a. Submitted details and their supporting evidence ensure that energy consumption details are appropriate.
 - i. Monthly data are available for electricity and natural gas from April 2021 to March 2024.

Based on the observations related to inventory management as above, the reported energy consumption has “**Reasonable Assurance**”, as assessed energy performance and related activities cover 95.0% of the confidence level.

As data covered for reporting of energy consumption for the period from April 1, 2021 to March 31, 2024, It is recommended that the baseline for FY 2021-22, FY 2022-23 and FY 2023-24 be considered, which can be used to track the offsetting the energy consumption by implemented renewable energy source for the performance periods with appropriate normalization.





6. Mandatory Requirements

1. Applicable legal requirements :

- a. India has made a commitment to become net zero by 2070. Further to this, by 2030, India aims to: (1) build non-fossil energy capacity to 500GW; (2) **meet 50% of energy requirements from renewable energy sources; (note: SRK committed to meet 100% of energy requirements from renewable energy sources at SRK House by March 2024)** (3) reduce total projected carbon emissions by 1 billion tonnes, **(note: SRK committed to meet minimum 95% of Scope 1 and Scope 2 emissions from renewable energy sources equivalent to more than 2000 tonnes of CO₂e at SRK House by March 2024)** and (4) reduce carbon intensity to less than 45%. To achieve these aims, various policies and mandatory requirements are being established by the Ministry of Power (MoP), Ministry of Environment and Forest & Climate Change, (MoEFCC) and Ministry of Jal Shakti (MoJS) under the National Action Plans for Climate Change (NAPCC). Various laws and requirements anchor, for the first time, a national goal in India of reducing greenhouse gas emissions.
- b. The legal requirements for greenhouse gas (GHG) emissions are not presently guided by the overarching policies aimed at promoting renewable energy and reducing carbon footprint. However, in managing the facilities and operations, these guidelines include performance improvement for energy consumption, waste management, and emission standards to ensure that the manufacturing process aligns with the country's commitment to environmental sustainability and climate change mitigation. Relevant business processes need to adhere to these regulations to contribute to the national goal of increasing renewable energy capacity while minimizing GHG emissions. For detailed and specific legal requirements, consulting the official guidelines and policy papers, as well as any local environmental regulations, is recommended.
- c. SRK's actions at SRK House related to mitigating climate change and supporting national targets, by complying with the applicable regulatory requirements and by adopting the best practices and technologies for achieving

intended outcomes of net zero emissions, are positive steps towards providing examples to their stakeholders.

2. Applicable business requirements :

- a. SRK's business activities are related to providing sustainable and affordable products. Therefore it is necessary to set an example for their facility (SRK House) by achieving Net Zero Energy requirements.

3. Applicable business requirements :

- a. Based on the portfolio of services provided by SRK, it is necessary to ensure all the stakeholder's requirements are supported and promote them to achieve the necessary net zero milestones.

4. Strategic and tactical requirements:

- a. Strategic requirements are those, which require actions at management levels, these include but are not limited to,

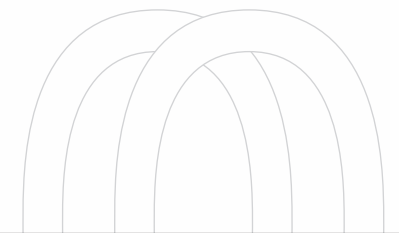
- i. Effective data management or documented information (accuracy, repeatability, frequency, period, etc.)

- ii. Appropriate decision-making (mainly time and related to provision of resources)

- iii. Competency improvements (users, support providers and decision makers)

- iv. Communication improvement (manual to automation, monthly to daily etc.)

- b. Tactical requirements are those, which require actions at technical levels



6. Details of Energy Consumption

Details of energy consumption for the reporting period of April 1, 2021 to March 31, 2024 and other financial years are presented herewith and the future performance periods including all the energy sources as defined in the scope and boundary are to be presented in the subsequent period (monthly updates are suggested to keep the track on net zero-energy status).

1. Energy consumption details based on the project's activities (inventory scope and boundary) :

- a. Electricity and natural gas: SRK House has various energy sources – electricity and PNG. No other energy source is used within the stated boundary and its related scope. Energy consumption for electricity and PNG is presented in the table below and sourced from the utility bills from TPL and GGL.



Table 2: Energy Consumption for FY 2021-22

Month	Electricity Consumed (As per Bill), kWh	Natural Gas Consumed (As per Bill), kBtu	Overall Equivalent Electricity Consumption (kWh)
Apr-21	2,48,805	66,049	2,68,163
May-21	2,69,730	63,247	2,88,267
Jun-21	2,15,340	50,346	2,30,095
Jul-21	2,57,955	68,854	2,78,135
Aug-21	2,07,780	58,499	2,24,925
Sep-21	2,29,155	69,163	2,49,425
Oct-21	2,20,035	69,457	2,40,392
Nov-21	91,125	17,984	96,396
Dec-21	2,12,730	73,400	2,34,242
Jan-22	1,87,485	72,314	2,08,679
Feb-22	1,84,800	67,714	2,04,646
Mar-22	2,41,860	68,285	2,61,873
Total	25,66,800	7,45,311	27,85,238

Table 3: Energy Consumption for FY 2022-23

Month	Electricity Consumed (As per Bill), kWh	Natural Gas Consumed (As per Bill), kBtu	Overall Equivalent Electricity Consumption (kWh)
Apr-22	2,42,505	61,993	2,60,674
May-22	1,57,980	33,135	1,67,691
Jun-22	2,48,790	57,981	2,65,783
Jul-22	2,40,630	70,267	2,61,224
Aug-22	2,19,705	61,265	2,37,661
Sep-22	2,27,220	67,916	2,47,125
Oct-22	1,74,300	46,565	1,87,947
Nov-22	1,18,005	17,585	1,23,159
Dec-22	1,98,870	71,943	2,19,955
Jan-23	1,38,990	52,558	1,54,394
Feb-23	1,47,915	61,016	1,65,798
Mar-23	2,25,255	68,193	2,45,241
Total	23,40,165	6,70,417	25,36,653

Table 4: Energy Consumption for FY 2023-24

Month	Electricity Consumed (As per Bill), kWh	Natural Gas Consumed (As per Bill), kBtu	Overall Equivalent Electricity Consumption (kWh)
Apr-23	2,20,875	59,975	2,38,453
May-23	1,52,865	29,754	1,61,585
Jun-23	2,38,590	60,657	2,56,367
Jul-23	2,23,725	61,845	2,41,851
Aug-23	2,09,925	56,627	2,26,521
Sep-23	2,04,510	46,944	2,18,268
Oct-23	2,08,845	44,345	2,21,842
Nov-23	76,620	12,429	80,263
Dec-23	1,17,570	16,955	1,22,539
Jan-24	1,69,995	48,382	1,84,175
Feb-24	1,86,285	58,277	2,03,365
Mar-24	2,09,655	55,457	2,25,909
Total	22,19,460	5,51,646	23,81,138

8. Target Setting

To achieve the milestone, the targets are set for various activities. This is performed by

1. Establishing targets for the relevant activity(ies), the following requirements are ensured.

- a. Specific and consistent with the commitment
- b. Measurable, as appropriate and if practicable
- c. Achievable, to ensure the effectiveness
- d. Realistic, to have confidence in achieving intended results
- e. Time-bound
- f. Being able to monitor and communicate
- g. Consider applicable requirements (legal, business, stakeholders etc)



2. Based on the monthly energy consumption details for electricity and piped natural gas, the future energy consumption for the following performance period is estimated based on:

- a. To evaluate the capacity of the proposed solar plant to offset all the energy consumption for the respective periods.
- b. To ensure, that the peak consumption is considered for the respective months and/or performance periods to minimize the risk of mitigating with the renewable energy sources.
- c. Predicted energy consumption for the next performance period is estimated as per the following table.

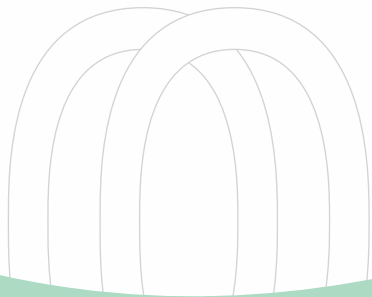


Table 5: Predicted Energy Consumption

Month	Electricity, kWh*	Natural Gas, kBtu	Overall Equivalent Electricity, kWh
Apr	2,26,305	57,181	2,43,064
May	1,96,905	52,232	2,12,213
Jun	2,48,790	60,657	2,66,567
Jul	2,57,955	70,267	2,78,549
Aug	2,19,705	61,265	2,37,661
Sep	2,29,155	69,163	2,49,425
Oct	2,20,035	69,457	2,40,392
Nov	1,18,005	17,984	1,23,276
Dec	2,12,730	73,400	2,34,242
Jan	1,87,485	72,314	2,08,679
Feb	1,86,285	67,714	2,06,131
Mar	2,41,860	68,285	2,61,873
Total	25,45,215	7,39,918	27,62,072

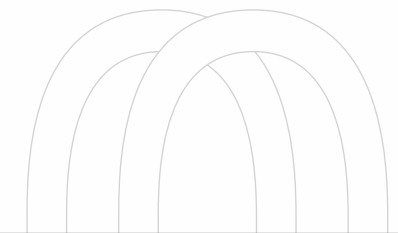
***Predicted data is the highest value of respective month of previous 3 years**

3. Hence, the net equivalent energy required at the site is 27,62,072 kWh and to offset the same 32,60,502 kWh needs to be generated every year at maximum as per the following estimation.

Table 6: Predicted Energy Generation			
Sr	Particulars	Units	Value
1	Gross unit generation	kWh	32,60,502
2	Distribution Losses @ 9.50%	kWh	3,09,748
3	Transmission Losses @3.25%	kWh	95,900
4	Wheeling Losses @ 3.25%	kWh	92,783
5	Net available units at the site for offset or export	kWh	27,62,072
6	The total capacity of solar plant required at an offsite	kWp DC	2047.22
7	Recommended Capacity	kWp DC	2411.08

1. Any assumptions during the estimation of future energy consumptions and solar plant capacity.

- a. Actual and maximum energy consumption for the respective months of the past three years is considered as monthly energy consumption.



- b. The conversion factor from kBtu to kWh is considered as 3.412
 - c. FY 2021-22 is observed to be the highest energy consumption since occupancy of the building. (April 2011 to date)
 - d. Solar electricity generation is referenced from the manufacturer's data sheet and is considered to average 4.363 kWh gross generation per kWp DC per day.
 - e. The total working days for the solar plant is considered 365, however, guaranteed generation is 85% of the estimated generation (as per PO terms and conditions), which means a maximum of 15% generation can vary due to maintenance and weather conditions.
 - f. The timeline to implement the above requirement is December 2023.
2. Any exclusions and/or limitations during the estimation of future energy consumption and solar plant capacity.
- a. Nil



3. Relevant performance indicators required

a. Electricity generation

I. Daily and monthly values in kWh - Predicted

ii. Daily and monthly values in kWh - Actual

iii. kWh block data generation – 15 minutes interval

iv. GHI data in W/m² – 15 minutes interval

v. GTI data in W/m² – 15 minutes interval

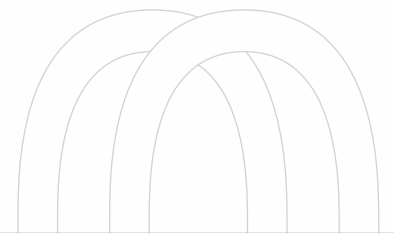
vi. Daily and monthly breakdown details in hours – Actual

vii. Weather details at the site (Continuous): dry bulb temperature, humidity, PV module temperature, wind speed and wind direction, precipitation

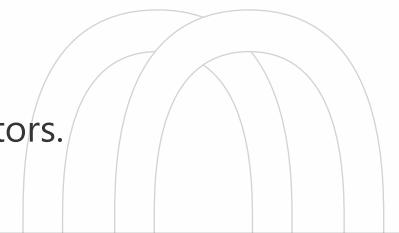
viii. Additional indicators can be made as appropriate

b. Electricity consumption

I. Daily and monthly values in kWh - Predicted



- i. Daily and monthly values in kWh - Actual
 - ii. kWh block data consumption – 15-minute interval
 - iii. Daily and monthly values in kWh - Setoff estimates
 - iv. Daily and monthly values in kWh – export to the grid
 - v. Daily and monthly values in kWh – import from the grid
 - vi. Daily and monthly values in kWh – ToU1 and ToU2 consumption
 - vii. Daily and monthly values in kWh – NTC consumption
 - viii. Daily and monthly breakdown details in hours – Actual
 - ix. Additional indicators can be made as appropriate
- c. Piped natural gas consumption
 - i. Daily and monthly values in SCM and mmBtu
 - d. Monthly bills and estimates from electricity supplier – TPL
 - e. Monthly bills from natural gas supplier - GGCL
 - f. Coverage of all the related activities needs to be considered first to define any specific indicators.

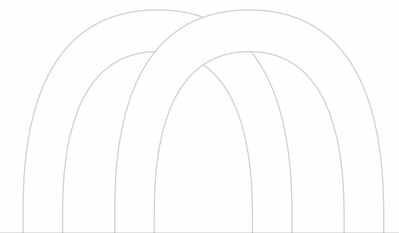




9. Action Plan(s)

To achieve the defined target for various activities, action plan(s) are established. This is performed by

1. For each target, action plan(s) is developed that is required to support implementation and includes the following attributes.
 - a. What will be done?
 - b. What resources will be required?
 - c. Who will be responsible?
 - d. When it will be completed
 - e. Where it is applicable
 - f. How performance improvement will be verified (method)
 - g. How results will be verified

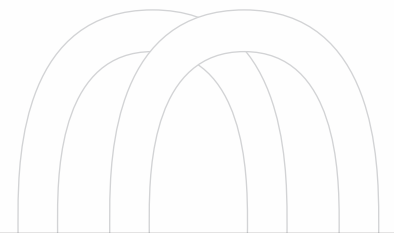


2. The relevant action plan(s) are submitted, concerning relevant information as described above to ensure appropriate implementation and monitoring requirements.

Installed Capacity of the Solar Plant

The required capacity is installed in two phases at different locations.

- a. Phase 1 – 2400 kW DC ground-mounted solar plant
 - i. Location: Akala, Amreli, Gujarat
 - ii. <https://maps.app.goo.gl/8Y6o8weitsbXrqUi8>
 - iii. PO no. SRD/PO/SUR/SP/20230427 dated 27-Apr-2023
 - iv. GEDA Registration: GEDA/SOL-555/2023/04/OW/082 dated 11-Apr-2023
 - v. PGVCL Meter Test Report Plant: 31918 dated 06-Mar-2024
 - vi. PGVCL Meter Test Report Substation: 31917 dated 06-Mar-2024
 - vii. Wheeling Agreement (provisional) with TPL: IN-GJ29665515173591W dated 14-Feb-2024



viii. Long-term open access approval letter from GETCO: GETCO/R&C/LTOA/2259/572 dated 20-Mar-2024

ix. GEDA commissioning letter: GEDA/SOL-555/2024/03/OW/8225 dated 30 Mar 2024

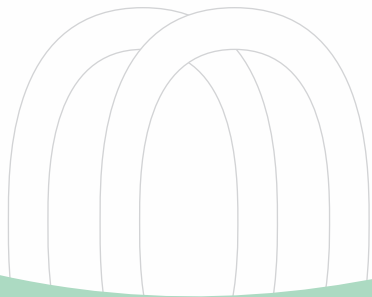
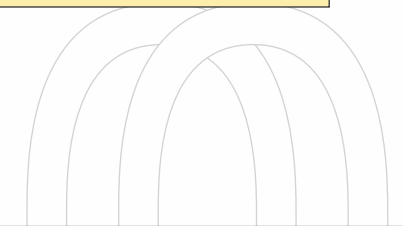


Table 7: Predicted Monthly Energy Generation

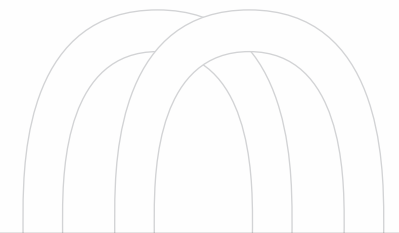
Month	Gross Electricity Generated - Solar Plant (kWh)	Net Electricity Generated - Solar Plant (kWh)
Apr	4,02,337	3,40,832
May	4,26,315	3,61,145
Jun	3,58,585	3,03,768
Jul	2,62,282	2,22,187
Aug	2,72,402	2,30,760
Sep	3,18,965	2,70,205
Oct	3,14,394	2,66,333
Nov	2,75,192	2,33,124
Dec	2,62,750	2,22,584
Jan	2,74,614	2,32,634
Feb	2,94,805	2,49,738
Mar	3,77,358	3,19,671
Total	38,40,000	32,52,983

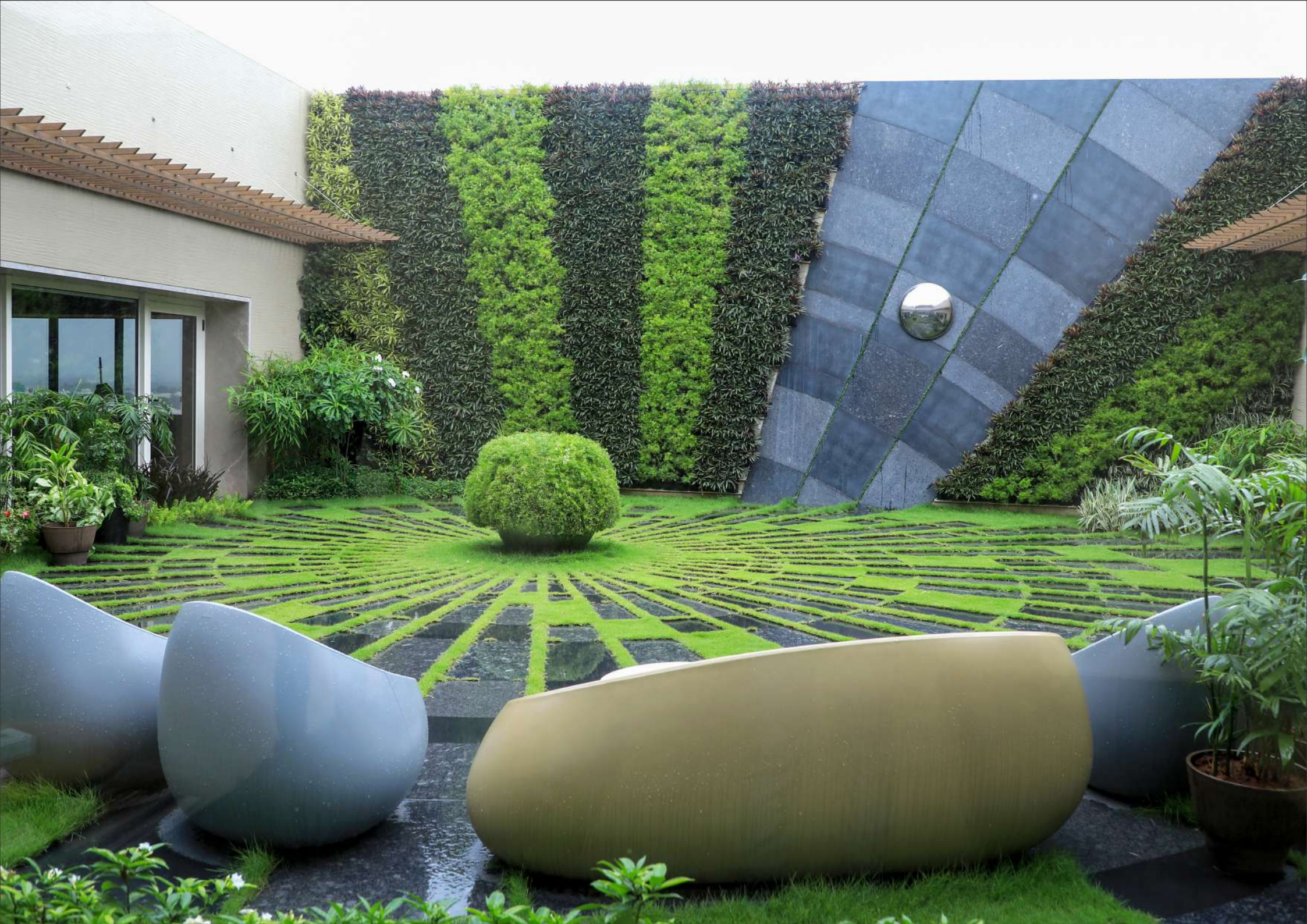


10. Allocation of Resources

Appropriate resources (including human resources, financial, technological, data collection infrastructure and specialized skills) in achieving Net Zero Energy targets are allocated.

1. The provision of appropriate resources is recorded for additional verification and validation processes.
2. Data collection infrastructure includes the provision of additional meters, data loggers, updates in BMS/EMS, and/or handheld or portable tools for measurements, that provide more data to determine opportunities for improvements.
3. The technological resource includes the implementation of updates in best available practices and technologies like the use of AI/ML techniques.

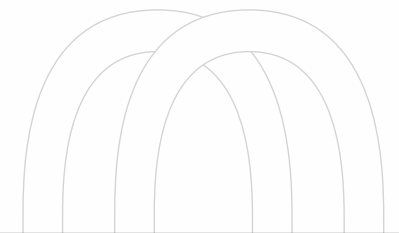


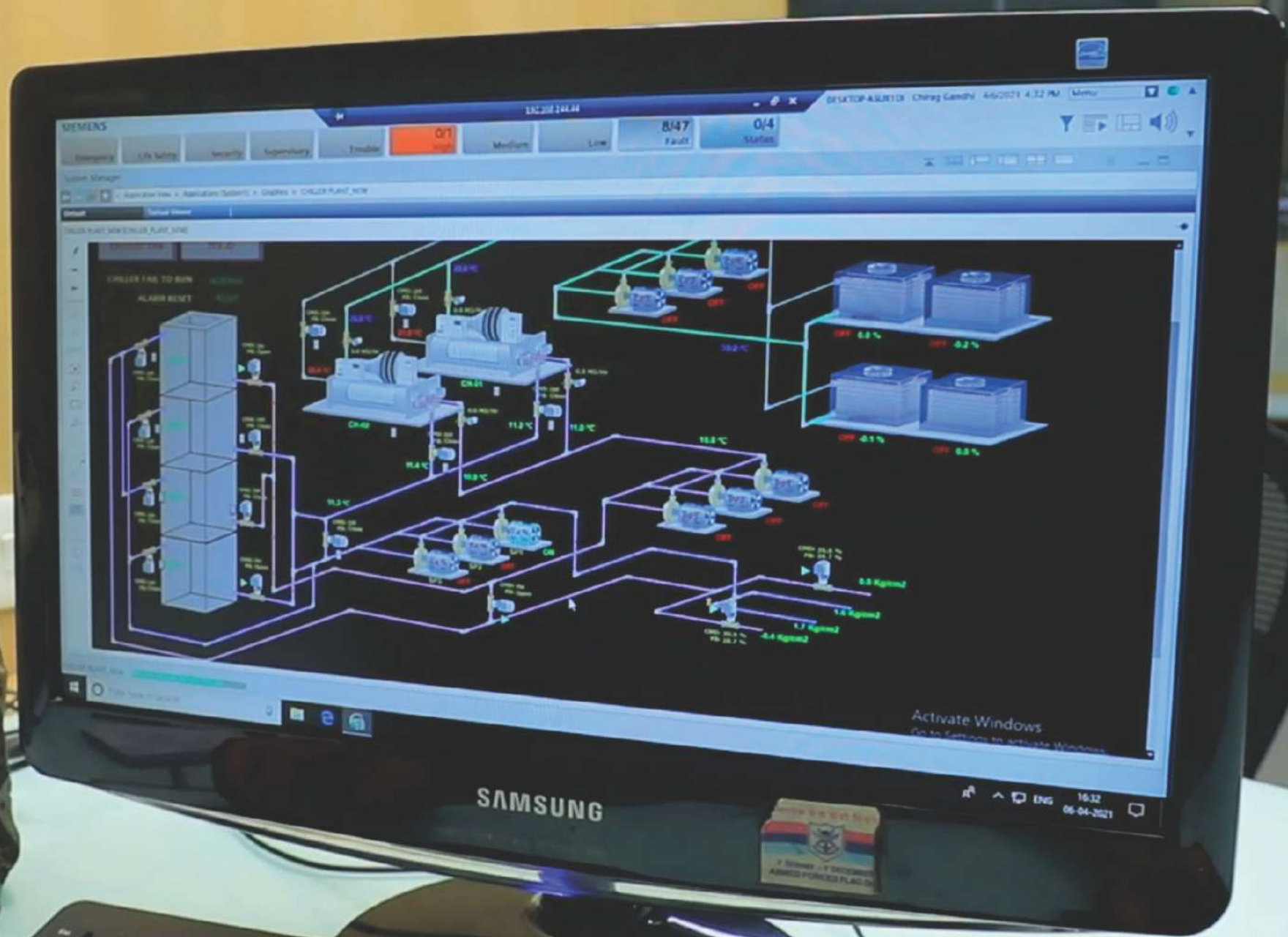


11. Impact Assessment

Due to limitations related to the assessment, manufacturing outputs and availability of the data, the impact assessment and relevant risk management in achieving Net Zero Energy targets can be predicted as low to medium except for the financial risk. However, once all the limitations are ensured by implementing relevant measures, impact assessment can be performed based on applicability and related to the past measures taken by SRK at SRK House. The following impact assessment categories are recommended in reporting from the next performance period.

1. Climate risks and opportunities relevant to the project's scope and boundaries.
2. Progress against net zero energy targets and relevant action plans including the impact of actions taken. (milestone achievements)
3. Specific requirements for energy performance and offsets beyond boundaries including impact on climate change.
4. Impact and/or benefits for the achieved net zero status and sustaining the same for the following performance periods.
5. Financial risks due to non-performing assets (solar plant and its associated equipment)
6. Financial risks due to updates in applicable legal requirements





12. Mitigation and Offset Management

GNFZ's Net Zero Energy certification

The basic terminology used to achieve Net Zero Energy is

Total energy consumed (all sources and non-renewables) \leq Total energy generated (renewables - offsite or onsite) + Total alternative energy consumed (renewables - offsite or onsite)

Total energy consumed (all sources and non-renewables) covers all types of energy sources (non-renewable) and all types of energy used by the organizations for their business activities and within the control of the organization for the specific period (recommend annually).

As discussed in the "Energy Consumption Details" section, the total energy consumption is reported for all sources and non-renewables.

Total alternative energy consumed (renewables – offsite or onsite) covers the consumption of alternative sources of energy (which eliminate the non-renewable energy source intake) by the organizations for their business activities and within the control of the organization for a specific period (recommended annually). Generally, all types of renewable energy sources are considered.

The total alternative energy consumption is not applicable, as there is no other source available based on site location (stated scope and boundary) that can qualify for this purpose.



Total energy generated (renewable – offsite or onsite) covers the quantity of energy produced or procured from renewable sources and consumed for internal use and/or supplied to external requirements by the organizations for their business activities and within the control of the organization for the specific period (recommend annually).

Hence, SRK House opted for energy generation from captive power plant (2400 kWp DC) from renewables – offsite (solar).

The following table represents the overall summary of the above requirements for GNfZ's Net Zero Energy certification.



Table 8: Comparison of Net Zero Energy

Month	Net Electricity Generated - Solar Plant (0.814+3.6 – MWp), kWh	Overall Equivalent Energy (Electricity + PNG) Consumption, kWh	Type of Data	Difference, Generation – Consumption, kWh
Apr-24	3,23,063	2,43,064	(As per Bill)	79,999
May-24	3,61,145	2,12,213	(As per Bill)	1,48,932
Jun-24	3,03,768	2,66,567	Estimate	37,201
Jul-24	2,22,187	2,78,549	Estimate	-56,362
Aug-24	2,30,760	2,37,661	Estimate	-6,901
Sep-24	2,70,205	2,49,425	Estimate	20,780
Oct-24	2,66,333	2,40,392	Estimate	25,941
Nov-24	2,33,124	1,23,276	Estimate	1,09,848
Dec-24	2,22,584	2,34,242	Estimate	-11,658
Jan-25	2,32,634	2,08,679	Estimate	23,955
Feb-25	2,49,738	2,06,131	Estimate	43,608
Mar-25	3,19,671	2,61,873	Estimate	57,798
Total	32,52,983	27,62,072		4,73,141

Based on the basic terminology used to achieve Net Zero Energy

Total energy consumed (all sources & non-renewables) \leq Total energy generated (renewables - offsite or onsite) + Total alternative energy consumed (renewables - offsite or onsite)

For SRK House and based on the above details:

Total energy consumed (27,62,072 kWh) \leq Total energy generated (renewables - offsite or onsite) (32,52,983 kWh – Net) + Total alternative energy consumed (renewables - offsite or onsite) (0 kWh)

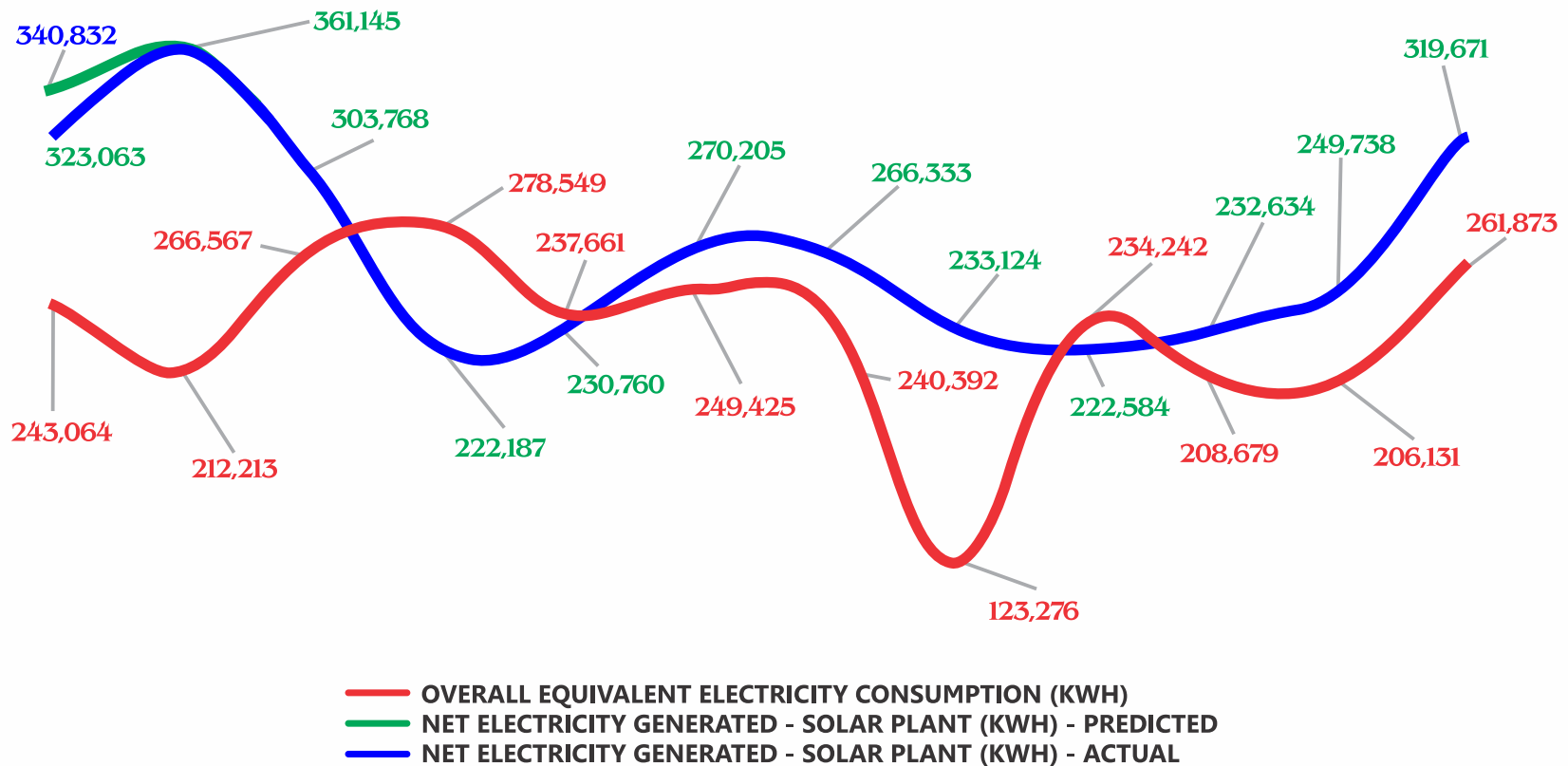
As per these criteria,

- a) There is excess generation @ 4,73,141 kWh net, which corresponds to 17.13% of maximum energy consumption and 14.54% of net electricity generation.
- b) Predicted annual consumption is the highest consumption based on the building life cycle to date. Actual consumption for FY 2022-23 is 8.2% less and FY 2023-24 is 13.8% less.
- c) It can be said, that, there is a clear margin of 25% (@15% from the generation side and @10% from the consumption side)
- d) The billing cycle is defined by the utility company (TPL) and they mention the net generated units for the specific month in the next billing cycle for estimation of applicable charges. (i.e. Net generated units (setoff units only) for Jan will be reflected in Feb – actual consumption of “Feb” month will be considered while adjusting the net generation (setoff units) of “Jan”). To ensure consistency in reporting all the units, the same pattern as per the utility invoices is followed.

e) Considering the overall performance for May 2024 and various agreements with the regulatory authorities, it can be said that, SRK House fulfils the criteria for Net Zero Energy certification and it is recommended that, the provisional "Net Zero Energy" certificate be issued, after verification of the report.

Figure : Net Zero – Energy Estimate

Energy Generation (Net) Vs Energy Consumption - Monthly Estimate in kWh

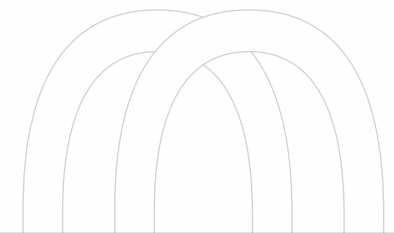


APR-24 MAY-24 JUN-24 APR-24 APR-24 APR-24 APR-24 APR-24 APR-24 APR-24 APR-24 APR-24

Table 9: Net Zero Energy Criteria

GNFZ's Net Zero Energy
Applicable and focused on all the projects including buildings (classified as per IBC) and all types of industries (classified as per ILO) that have or can have an impact on water consumption.
Considers site energy (within the organization's control). Eliminate the use of source conversion factors.
Energy balance is developed based on "CUSUM" techniques for the period of the past 12 months and updated monthly to ensure that the project sustains the Net Zero certification.
Considers impact-related criteria to certify the project (encourage the project to improve on the business activities that can lead to additional sustainability-related compliances like ESG or UNSDG).
Considers on-site or off-site energy-related measures to maintain net zero status. However, accounting is based on CUSUM techniques and updated monthly.
Can be combined with other energy-related tools, standards and guidelines (like EnMS, and CFV)

IBC – International Building Code; ILO – International Labor Organization



Emissions Related to Net Zero Energy

Based on the estimation of emissions, as SRK House implemented its energy requirements from renewable energy sources, the equivalent emission from the Scope 1 and Scope 2 categories can also be mitigated. Following are the details of such estimates.

Scope 1 or direct emission: The emission factor for natural gas is considered based on NCV and SCM values mentioned in the relevant invoices from the supplier and a 100% conversion rate. This equivalent is 14.43 kg of carbon per mmBtu and 52.91 kgCO₂ per mmBtu (14.43 x 44/12).

Scope 2 or indirect emissions: The total electrical energy consumption from the grid is estimated based on actual data based on TPL invoices and covers non-renewables sources only for April 2021 to March 2024. No other energy source is used within the stated boundary and its related scope. Hence, emission due to electricity use from the grid is presented in the table below.

Table 10: Scope 2 Emission Factor for Electricity Use from Grid*

Emission Factors (tCO ₂ /MWh) (incl. Imports)	FY 2021-22	FY 2022-23	FY 2023-24
Simple Operating Margin (1) (2)	0.960	0.971	0.971
Build Margin (not adjusted for imports)	0.869	0.867	0.867
Combined Margin (1) (2)	0.915	0.919	0.919
Weighted Average Emission Rate (2)	0.810	0.823	0.823
Weighted Average Emission Rate Incl. RES (2)	0.711	0.713	0.713

*Source: CEA database – India – declared recently for the FY 2022-23 data and hence, the same factors are considered for FY 2023-24

Table 11: Summary of Emissions

Sr No	Emission Category	Reported Emissions FY 2021-22 (kgCO2e)	Reported Emissions FY 2022-23 (kgCO2e)	Reported Emissions FY 2023-24 (kgCO2e)	Level of Assurance
1	Scope 1	39,434	35,472	29,188	95.00%
2	Scope 2	20,78,036	19,25,956	18,26,616	95.00%
	Total	21,17,470	19,61,428	18,55,803	95.00%

Note:

1. The level of assurance is estimated based on
 - a. Data availability,
 - b. Data accuracy,
 - c. Coverage of activities for Scope 1 and 2 emissions
 - d. Assumptions made to estimate emissions
- a. Overall assurance is based on a weighted average considering the emissions category and its independent level of assurance.

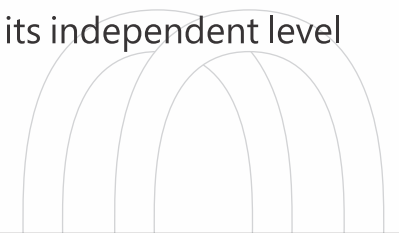
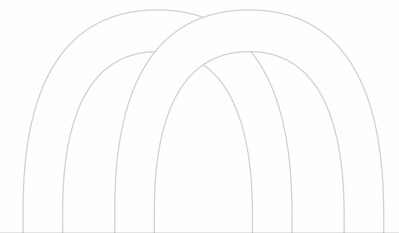


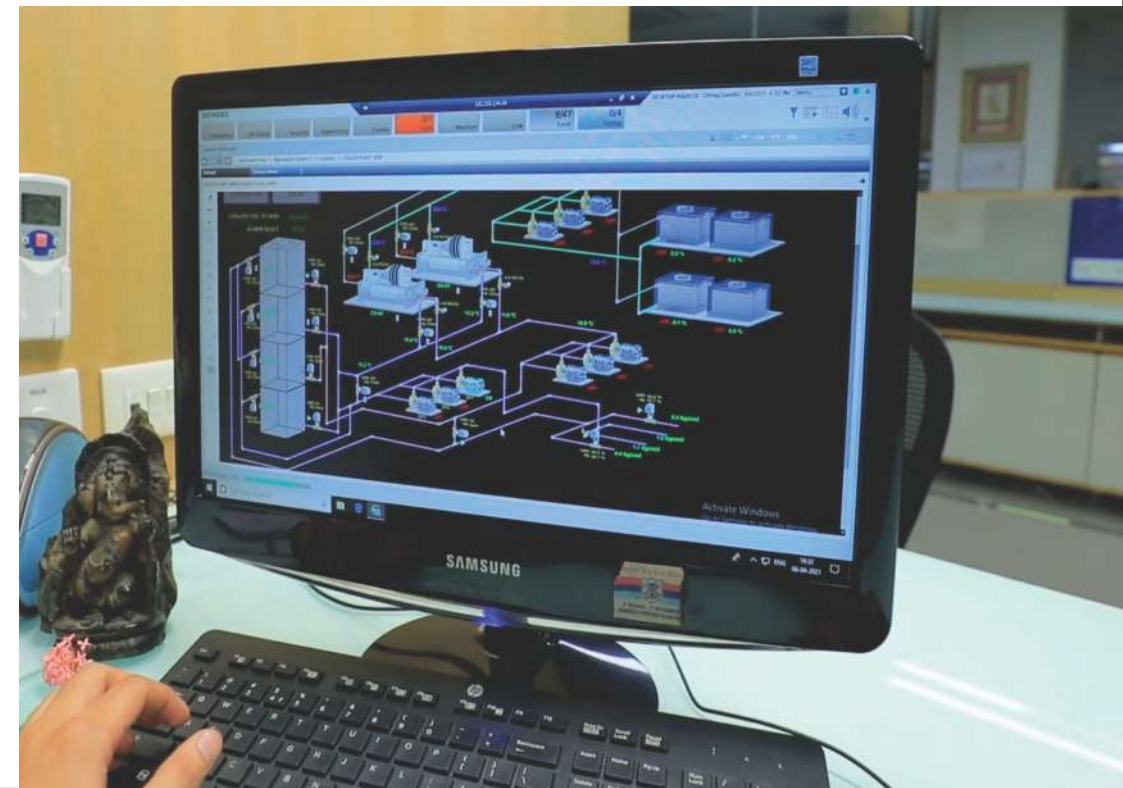
Table 12: Summary of Emissions Mitigation

Energy Source	Predicted Energy Consumption FY 2024-25	Estimated Emissions FY 2024-25 (kgCO₂e)	Predicted Net Generation (kWh)	Equivalent Emissions Mitigation FY 2024-25 (kgCO₂e)
Natural Gas, kBtu	7,39,918	Scope 1 – 39,149		
Electricity	25,45,215	Scope 2 – 20,94,712		
Total Equivalent, kWh	27,62,072	21,33,861	32,35,213	26,62,581

As per the table above, the difference between CO₂ equivalent mitigated **(26,62,581 kgCO₂e)** versus generated **(21,33,861 kgCO₂e)** is **518.018 tCO₂e**. This means SRK House can earn 528 REC certificates if overall performance is optimized/controlled based on the above-reported estimate.

We hope the information included herewith is useful in developing the necessary roadmaps for achieving more prestigious and sustainable results for the business activities of SRK House and creating benchmarks in energy, carbon and water performance. It is recommended that SRK House takes appropriate actions and strives for improvements considering other relevant frameworks.





13. Opportunities for Improvement

The following are the recommended opportunities for improvements in GHG emissions and their relevant evaluations.

1. Convert existing provisional agreement (for 2400 kWp DC solar plant) with regulatory authorities from Non-REC captive use to "REC with captive use". This will eliminate the banking charges for setoff units and relevant REC attributes can be claimed.
2. Track energy generation from the solar plant (2400 kWp DC) and ensure guaranteed performance is achieved as estimated and reported herewith.
3. A minimum of 12 months of performance is required to ensure "Net Zero" status from provisional to verified status. Hence, the SRK House team is advised to submit the monthly performance of energy generation and energy consumption with appropriate supporting evidence.
4. Post 12 months of performance verification, SRK House will receive "Net Zero" verified status and sustain the criteria for the same on a "CUSUM" basis (cumulative sum – every month, latest 12 months data will be considered to qualify and sustain for net zero status)
5. Data management
 - a. Maintain utility bills (electricity and piped natural gas) with relevant information (date, type of fuel used, quantities, distance, mode of transport etc.) mentioned in the same.



- b. Maintain performance indicators as defined in the report for solar power plant including tracking overall performance.
- c. Ensure data is available at a minimum monthly level, however, daily details are recommended for those activities which have significant emissions like energy-related activities.

6. Material and energy efficiency


- a. It is observed that annual energy consumption is in decreasing trends. However, energy consumption depends upon many factors like production volumes, weather conditions, occupancy, and equipment performance, it is necessary to control and/or optimize the use of energy to improve energy costs and reduce the related emissions.

7. Additionally, it is recommended that individual net zero milestones in water and waste categories can be achieved by adopting relevant criteria as appropriate.



14. Supporting Documented Information

The following is the documented information, submitted by SRK for SRK House, in support of the estimation of Net Zero Energy verification and validation.



GEDA
ગુજરાત ઊર્જા વિકાસ એજન્સી
GUJARAT ENERGY DEVELOPMENT AGENCY
A Government of Gujarat Organisation


GEDA/SOL-556/2024/03/CW/S024 Date: March 30, 2024

CERTIFICATE OF COMMISSIONING

This is to certify that M/s. Shree Ram Diamek Pvt. Ltd., 99, Vasta Devdi Road, Opp. Gayatri Mandir, Katargam, At- Surat, Ta-SuratSurat, Dist- Surat has installed and commissioned **2980 kW(AC)/ 3616.62 kW(DC)** capacity Solar Power Plant at Survey no.347 P3, of Village- Akala, Ta-Lathi, Dist.-Amreli on 23-02-2024 along with the associated equipment as per following details.

GEDA Registration No.	GMSPVINDGEDA11042023-556
Capacity of Solar Power Project	2980 kW(AC)/ 3616.62 kW(DC)
SPV Modules- Type / Make	Mono- PERC / Goldi
Nos. of Photovoltaic Modules / Rating	6636 / 545 Wp
Inverters- Type / Make	String / Waipower; Hwawei, Hwawei
Nos. of Inverter / Rating	09 / 275 kW, 01 / 185 kW, 02 / 160 kW
ABT Meter- Make / Serial no.	Secure / PG 5406 B
Name of Substation	66 kV GETCO S/S, Luvariya

The commissioning of the Ground Mounted Solar PV System has been carried out; the ABT meter has been installed.

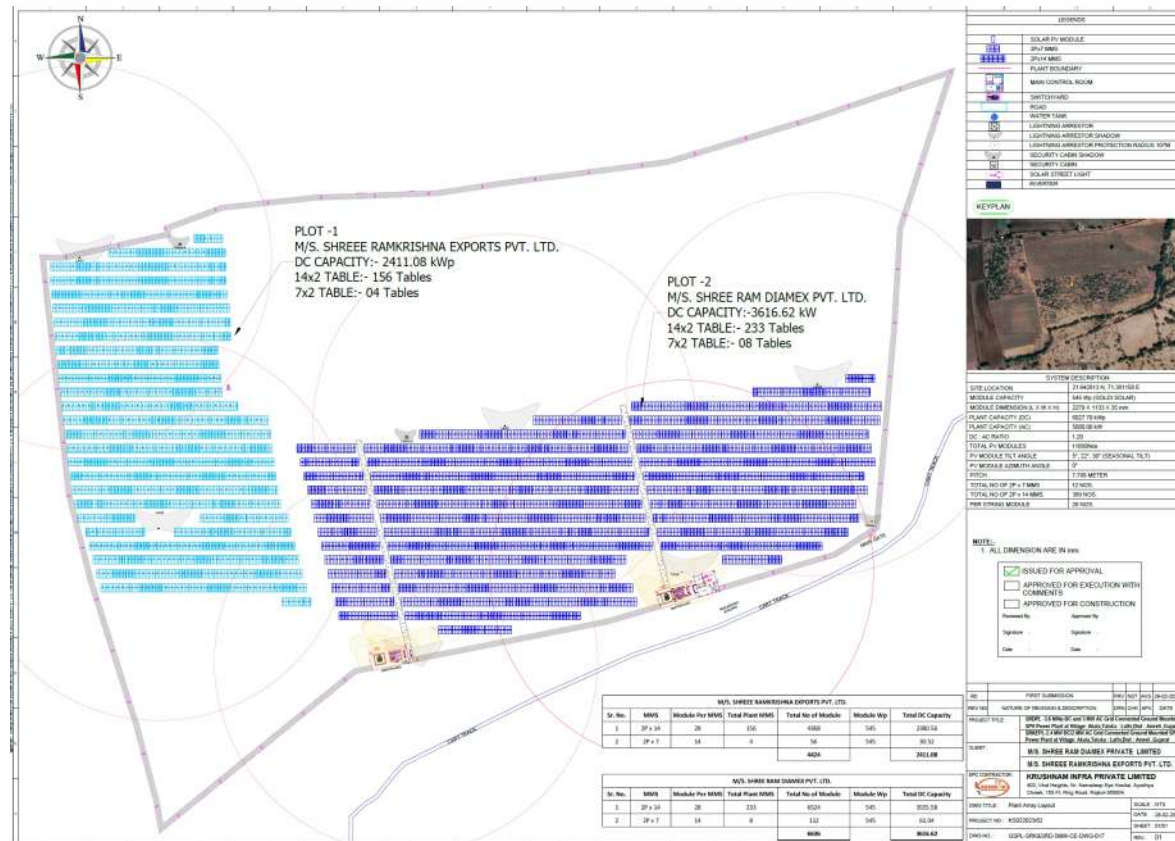
For Gujarat Energy Development Agency

Sr. Project Executive I/c.

To,
M/s. Shree Ram Diamek Pvt. Ltd.
99, Vasta Devdi Road, Opp. Gayatri Mandir, Katargam,
At- Surat, Ta-Surat,
Dist- Surat- 395004

Cc to: (1) Chief Engineer (Tech.),
Pancham Gujarat Vij Company Limited (PGVCL),
Registered & Corporate Office, Nana-mava Main Road,
Laxmi Nagar, Rajkot - 360004


(2) Chief Engineer, State Load Dispatch Centre (SLDC)
GETCO, 132KV Gotri Sub Station Compound,
Opp. Kalipruv building, Near T.B. Hospital, Gotri Road,
Vadodra - 390 021

Ph : 079-233-57261, 53
Fax : 91-79-232-47997, 57155
e-mail : director@geda.org.in
www.geda.gujarat.gov.in



LEGEND	
[Symbol]	SOLAR PV MODULE
[Symbol]	SPV INVERTER
[Symbol]	PLANT BOUNDARY
[Symbol]	MAIN CONTROL ROOM
[Symbol]	SWITCHYARD
[Symbol]	WATER TANK
[Symbol]	LIGHTNING ARRESTOR
[Symbol]	LIGHTNING ARRESTOR SHADOW
[Symbol]	LIGHTNING ARRESTOR PROTECTION RADIIUS SYM
[Symbol]	SECURITY CABLE SHADOW
[Symbol]	SECURITY CABLE
[Symbol]	SOLAR STREET LIGHT
[Symbol]	ROADWAY

KEY PLAN



SYSTEM SPECIFICATION	
SITE LOCATION	21, HANDELA, TAL. SHIBIR
MODULE CAPACITY	545 Wp (PERK SOLAR)
MODULE DIMENSION (L x W x H)	2079 x 1131 x 35 mm
PLANT CAPACITY (PDC)	6607 KW (PDC)
PLANT CAPACITY (AC)	3000 KW (AC)
DC AC RATIO	1.20
TOTAL PV MODULES	6636
PV MODULE TILT ANGLE	6° 30' (SEASONAL TILT)
PV MODULE SPACING (METER)	2.7
INVERTER	17.5M METER
TOTAL NO. OF PV INVERTER	9
TOTAL NO. OF PV INVERTER	9
PER STRAND MODULE	29.80

NOTE:
1. ALL DIMENSION ARE IN mm.

ISSUED FOR APPROVAL
 APPROVED FOR EXECUTION WITH COMMENTS
 APPROVED FOR CONSTRUCTION

Prepared By: _____ Approved By: _____
Signature: _____ Signature: _____
Date: _____ Date: _____

M/S. SHREE RAMKRISHNA EXPORTS PVT. LTD.			
Sr. No.	MMW	Module Per MMW	Total Plant MMW
1	2P x 34	28	156
2	2P x 7	4	28
			184
			4028
			4028

M/S. SHREE RAM DIAMEK PVT. LTD.			
Sr. No.	MMW	Module Per MMW	Total Plant MMW
1	2P x 34	28	233
2	2P x 7	4	28
			261
			6636
			6636