

# Environmental Report

JCET Group – Jun 2022

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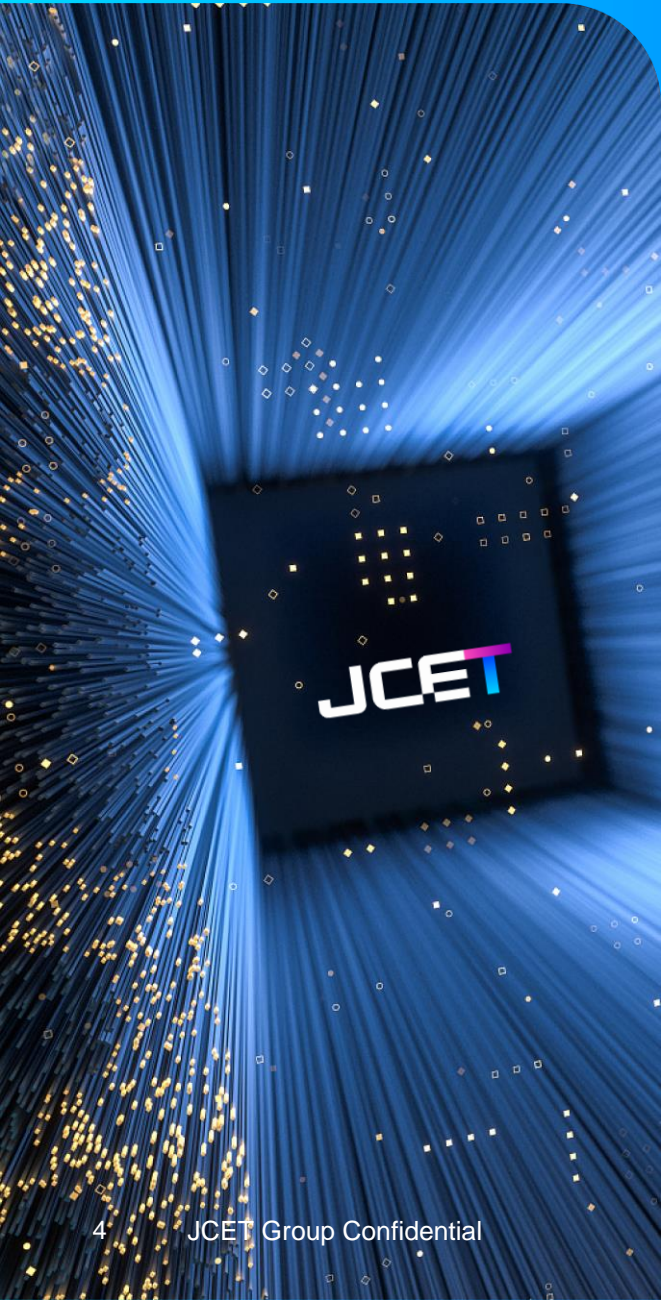
# Environmental Report

- I. EHS Policy and Environmental Goal
- II. Energy Consumption & GHG Emission Monitoring
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## I. EHS Policy and Environmental Goal

The company always adheres to the policy of “Safety First, Environmental Protection Priority, Prevention First, Comprehensive Management” and the concept of “People-oriented, Safe development”, and continues to ISO 14001, ISO 45001 system operation and safety production standardization, clean production construction, through strengthening leadership, implementing responsibilities, strengthening education and training, deepening inspection and supervision and safety and environmental protection.

Activities are carried out, and management norms and mechanisms are improved, and the improvement and application of safety and environmental protection technologies are promoted to ensure the safety and stability of the production process.



# I. EHS Policy and Environmental Goal

10 years goal from 2020 to 2030:



Reduce Energy Consumption & GHG Emission per Unit Output Value by 15%



Reuse/ Recycle >20% of water



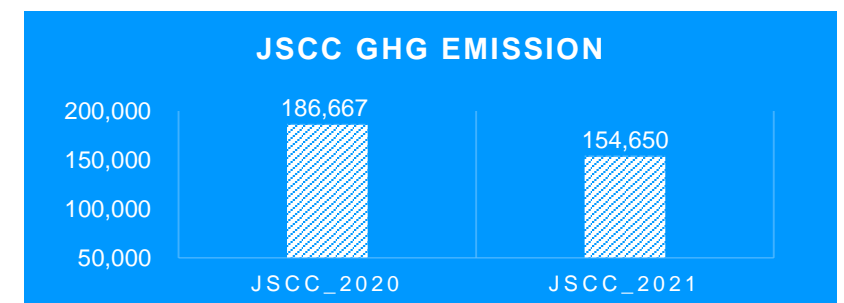
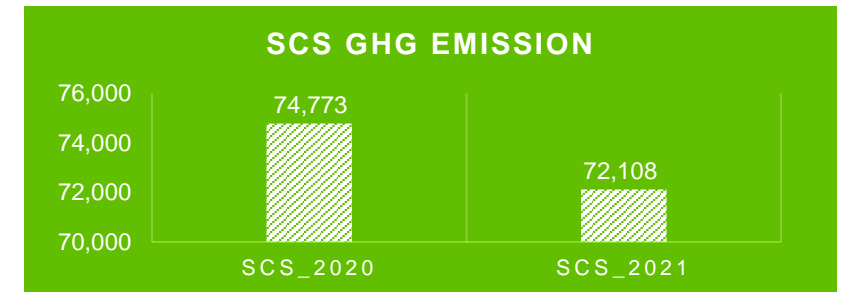
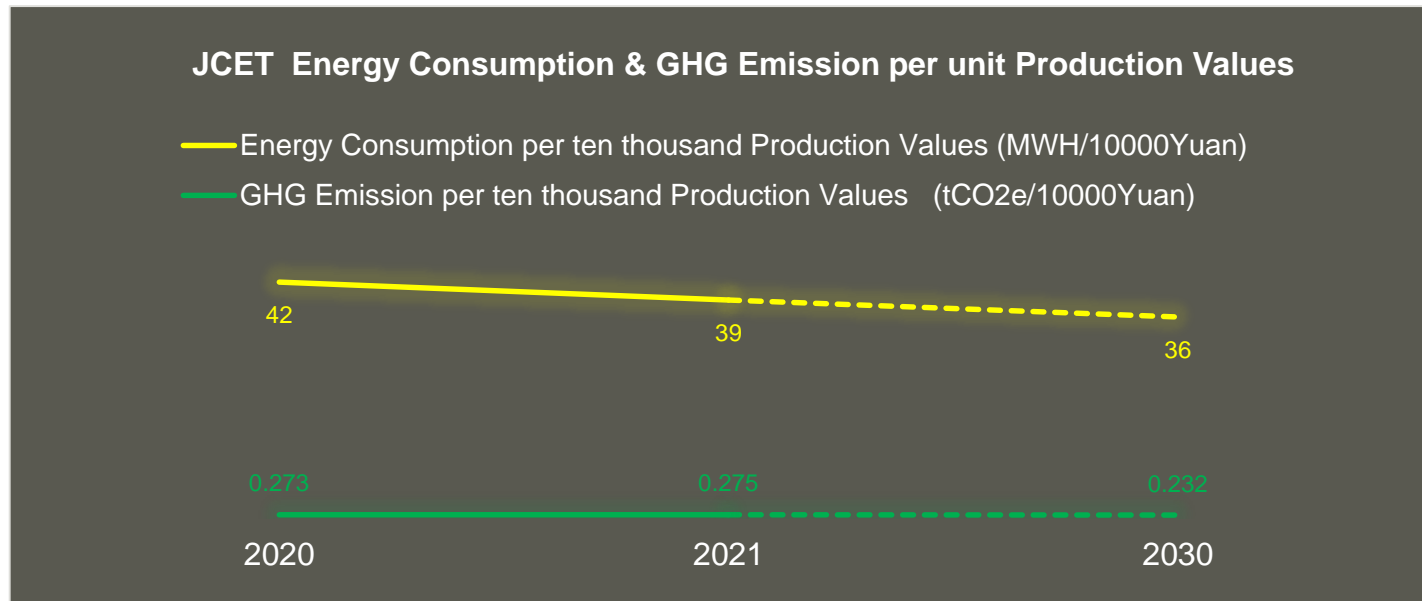
Recycle >60% of waste

With the 7 factories ( JCET-D3, D8, D9, JSCC, JCAP, JSCK/SCK and SCS) integration, using 2020 year as baseline.

## II. Energy Consumption & GHG Emission Monitoring

Carbon management is an integral part of JCET's business. Through the internal GHG summary report prepared according to ISO 14064 Standard and 2006 IPCC Guidelines for National Greenhouse Gas Inventories, we regularly calculate the GHG emission of the operating plant every year, and implement emission reduction measures in a planned way.

From 2020 to 2021, the GHG emission per unit output value of JCET Group increased from 0.273 tCO<sub>2</sub>e/10000Yuan to 0.275 tCO<sub>2</sub>e/10000Yuan. Due to the expansion and development of production, the energy consumption per unit output value decreased from 42 MWH/10000Yuan to 39 MWH/10000Yuan. Among them, SCS and JSCC plants have shown a reduction in GHG emissions as shown in the chart, SCS reduced by 4% and JSCC by 17%.




## II. Energy Consumption & GHG Emission Monitoring

The following are the reduction actions taken by seven factories and the corresponding calculation results. We will proactively implement all types of energy conservation programs in all our factories and continue to comply with green building standards as we build new systems and modernize existing ones.


### Reduction Efforts:

Factories	Items	Facility Capacity (MWh/year)	CO <sub>2</sub> Reduction (ton/year)
D3	Lighting reform in Workshop mezzanine	170.7	137.35
D8	Transformation of manual drain valve of centrifuge condensate tank into PNLDII pneumatic non-destructive valve; Transformation of HVAC; Reconstruction of compressed gas of back line electroplate.	2192	1765
D9	Modification of zero gas consumption in compressed gas drying tower; apply LED lamp and improvement of utility condition.	5063	4074
JCAP	Heat recovery and cooling capacity recovery system, energy saving by separating high and low pressure compressed gas.	8057	3756
JSCC	Heat recovery system, reuse of nitrogen and phosphorus waste water and excess reclaimed water to supply into cooling tower.	9405	4385
SCS SCK/JSCK	Heat recovery system, replaced with LED lamp and improvement of utility conditions.	9781	4560

### III. Improvement Plan on Energy Consumption & GHG Emission


Goal	Factories	Current & Future Improvement Plans	Result
 <p>Reduce energy consumption &amp; GHG emission per unit output value by 15% using 2020 as baseline</p>	D3	<ul style="list-style-type: none"> <li>➤ Use tap water instead of pure water in LGA cutting/ IC cutting vacuum pump</li> <li>➤ Change the courtyard lamp in front of the hall to solar lamp.</li> </ul>	In progress
	D8	<ul style="list-style-type: none"> <li>➤ Replace high energy consumption motor with energy-saving motor, which saves 5% of the rated power consumption.</li> <li>➤ Dry heat recovery of centrifugal air compressor.</li> </ul>	In progress
	D9	<ul style="list-style-type: none"> <li>➤ Modification of zero gas consumption in compressed gas drying tower</li> <li>➤ Use LED lamp and improvement of utility conditions</li> <li>➤ Heat recovery of compressor to heat up pure water, raw water and hot water of air condition</li> <li>➤ Installation of solar energy on building roof</li> <li>➤ Use green electric power under the guidance of the government.</li> </ul>	In progress
	JCAP	<ul style="list-style-type: none"> <li>➤ Eliminate high energy consumption nitrogen generation equipment and replace it with energy-saving equipment</li> <li>➤ Replace high energy consumption motor with energy-saving motor.</li> </ul>	In progress
	JSCC	<ul style="list-style-type: none"> <li>➤ Heat recovery of compressor to heat up hot water of air condition</li> <li>➤ Heat recovery of GST machine drainage.</li> </ul>	In progress
	SCK/JSCK	<ul style="list-style-type: none"> <li>➤ Heat recovery of compressor to heat up hot water</li> <li>➤ Use city water of DI system in winter.</li> </ul>	In progress
	SCS	<ul style="list-style-type: none"> <li>➤ Building 1&amp;2 chiller plant refurbishment</li> <li>➤ Optimize 1A CDA</li> <li>➤ Building 2 VSD air compressor.</li> </ul>	In progress

## IV. Improvement Plan on Reuse / Recycle of Water

Goal	Factories	Current & Future Improvement Plans	Result
 <p>Reuse/ recycle &gt;20% of water purchased using 2020 as baseline</p>	D3	<ul style="list-style-type: none"> <li>➤ Improve the utilization rate of reclaimed water, and use for toilets water, fountains and greening water.</li> </ul>	In progress
	D8	<ul style="list-style-type: none"> <li>➤ Reuse the steam condensate</li> <li>➤ Reuse the concentrated water from pure water station instead of tap water for dilution of dosing tank of sewage plant.</li> </ul>	In progress
	D9	<ul style="list-style-type: none"> <li>➤ Reuse the concentrated water from pure water station instead of tap water for dilution of dosing tank of sewage plant</li> <li>➤ Reuse the concentrated water from pure water station to supply into raw water tank, increase tap water utilization.</li> </ul>	In progress
	JCAP	<ul style="list-style-type: none"> <li>➤ Reuse the concentrated water from pure water station to supply into raw water tank, increase tap water utilization</li> <li>➤ Recycle scribing waste water after treatment, save water resources.</li> </ul>	In progress
	JSCC	<ul style="list-style-type: none"> <li>➤ Recycle the UF reverse washing water supply into cooling tower.</li> </ul>	In progress
	SCK/JSCK	<ul style="list-style-type: none"> <li>➤ Maintain waste water recycling operating &amp; Con`c RO operating;</li> <li>➤ Reuse of effluent water as cooling tower.</li> </ul>	In progress
	SCS	<ul style="list-style-type: none"> <li>➤ Waste water reclaim for new-water.</li> </ul>	In progress



# V. Improvement Plan on Recycle of Waste

Goal	Factories	Current & Future Improvement Plans	Result
 <p>Recycle &gt;60% of hazardous and non-hazardous waste using 2020 as baseline</p>	D3	<ul style="list-style-type: none"> <li>➤ Use material with less environmental impact, like use CR100 instead of alcohol to reduce the emission of VOCs;</li> <li>➤ Check on the recycling rate when selecting a waste treatment supplier.</li> </ul>	In progress
	D8	<ul style="list-style-type: none"> <li>➤ Reduce chemical consumption;</li> <li>➤ Check on the recycling rate when selecting a waste treatment supplier.</li> </ul>	In progress
	D9	<ul style="list-style-type: none"> <li>➤ Recycle of ribbon</li> <li>➤ Reduce chemical consumption</li> <li>➤ Check on the recycling rate when selecting a waste treatment supplier.</li> </ul>	In progress
	JCAP	<ul style="list-style-type: none"> <li>➤ Recycle of waste cartons</li> <li>➤ Reduce chemical consumption</li> <li>➤ Check on the recycling rate when selecting a waste treatment supplier.</li> </ul>	In progress
	JSCC	<ul style="list-style-type: none"> <li>➤ Recycle of ribbon, plastic packaging waste and waste cartons</li> <li>➤ Check on the recycling rate when selecting a waste treatment supplier.</li> </ul>	In progress
	SCK/JSCK	<ul style="list-style-type: none"> <li>➤ Check on the recycling rate when selecting a waste treatment supplier.</li> </ul>	In progress
	SCS	<ul style="list-style-type: none"> <li>➤ Reduce chemical consumption.</li> </ul>	In progress

Thank You !

The logo for JCET is centered within a dark blue circle. The letters 'JCET' are rendered in a bold, white, sans-serif font. The letter 'E' is uniquely styled with a horizontal bar that transitions from white to a light blue color. The background of the slide features a complex network of glowing lines and dots in shades of blue and purple, radiating outwards from the central logo area.

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