Operational Excellence Services

Decarbonization

Life Cycle Assessment/ Management (CO2 Footprint)

Contact Us

Technology Inquiries | Contact Us | JGC HOLDINGS CORPORATION

Access to Our Homepage

https://www.jgc.com/en/business/epc/operation-maintanance/service/

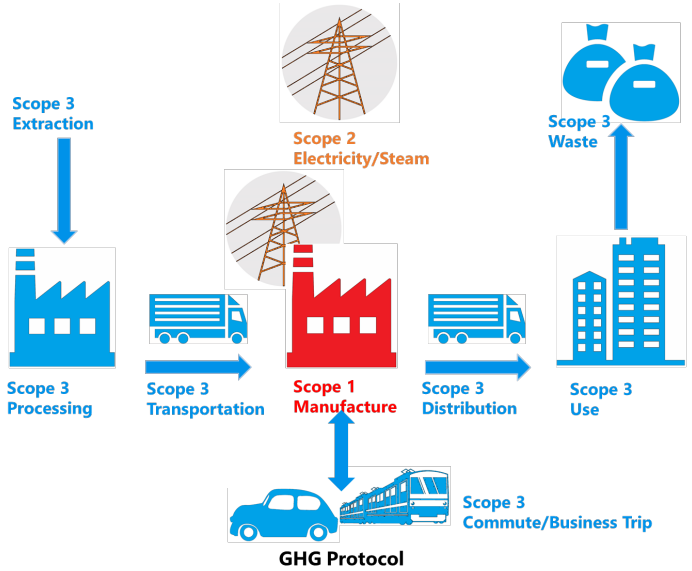
Life Cycle Assessment/Management (CO_2 Footprint)

What is the Life Cycle Assessment (LCA)?

LCA is a method of assessing the environmental impact of your product or service throughout its life cycle (resource extraction, raw materials, product production, distribution, consumption, disposal, recycling) or at a specific stage. LCA can objectively and quantitatively evaluate whether a product is "good" or "friendly" for the environment, human body, and society.

Concept of LCA

Advanced Application of LCA (LCM) to ....



High Client Concern on Environment Impact, Optimized Plant Life Cycle (Engineering, Procurement, Construction, Commissioning, Start up, Maintenance, Manning, Turnaround, Demolition) , GHG Protocol (Scope 1/2/3)

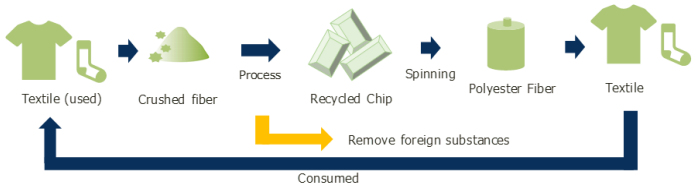
© 2023 JGC GROUP

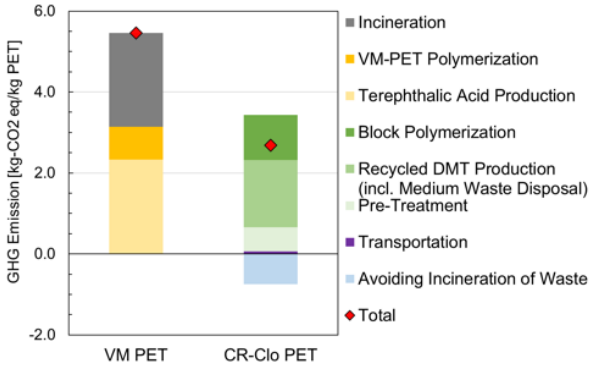
Life Cycle Assessment/Management (CO_2 Footprint)

Return to Decarbonization menu

Case Study, Experiences and expectations

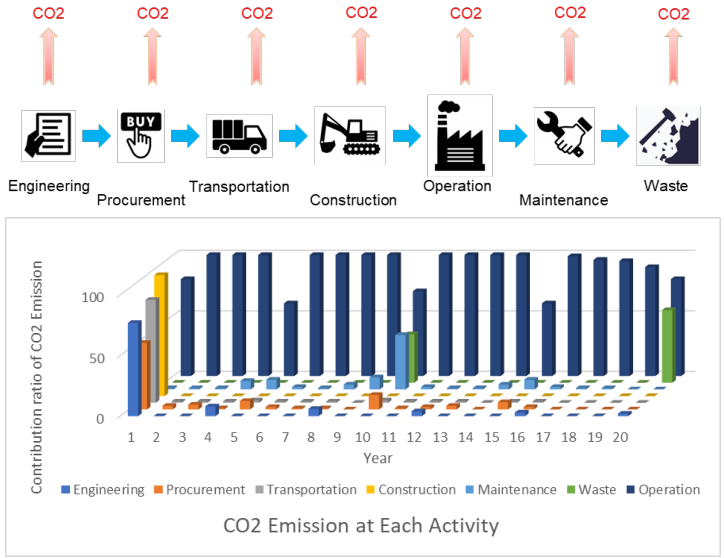
LCA of your product or service (e.g. Polyester Chemical Recycling)

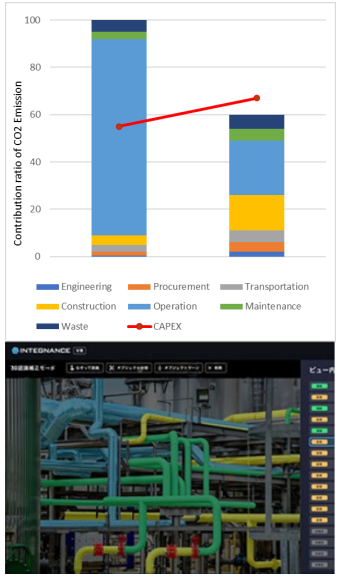




- Numerical result of CO_2 emissions
- Higher CO_2 reductions are expected compared with conventional process
- Visual presentation of hot spots
- The scope of evaluation, methods, and assumptions that greatly affect the results, it depends on the implementers and companies

- LCA case studies for new decarbonized technologies and made presentation in the International Conference (EcoBalance 2022)
- Calculate CO2 footprint (Scope 1/2/3) for CDP Report 2021 and 2022, JGC Holdings got Score B.
- Attend the 8th S-LCA Conference 2022 – Leave No One Behind -





CO2 footprint of Plant Lifecycle/Life Cycle Management

- Numerical approach for plant life cycle (GHG Protocol Scope 1/2/3)
- With Data-centric (DX), environmental impact as well as the operation data, can be monitored in real time, and identify the hotspots.
- Present data visualizations of high CO_2 emission hot spots during maintenance periods
- Trade off between CAPEX/OPEX and CO_2 emission rate for optimization

© 2023 JGC GROUP