



TNCHE Asia 2025 Conference
**"Accelerating Industrial Decarbonization:
Digital-AI and Energy Transformation "**
Presenter's Biodata & Abstract



Full Name

Rahul Khandelwal :

Organization

GTC Vorro Technology, LLC

Current Position

Business Director

Title of Presentation

Sulfur Removal: A Pathway For Energy Reduction and Decarbonization

Presentation Abstract:

Decarbonization and Energy efficiency are key economic drivers for various refining and petrochemical operators globally along with emphasis on minimizing sulfur emissions. Sulfur removal has been practiced in the industry for decades. However, with the development of new media, adsorbents or catalysts, it's now possible to achieve the above stated goals by deploying these materials in different applications related to refinery and petrochemical sectors. This paper will showcase the application of these novel materials in Fuel gas, LPG, FCC gasoline and Diesel desulfurization unit operations and highlight how they achieve the trifecta: Energy Efficiency, Decarbonization and SO₂ emissions reductions in an industrial complex. In particular, a case study pertaining to fuel gas desulfurization will be presented wherein it will shown how the acid dew point reduction leads to higher energy recovery across the air preheaters



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associated with fired heaters. The increased recovery translates into utility savings and greenhouse gas emissions reduction.

Presenter's Bio

Rahul Khandelwal is Business Director at GTC Vorro Technology with primary focus on sulfur removal and technology licensing. He has more than 17 years of experience in the industry in different sectors spanning from cryogenics to refining and petrochemical areas having worked in different roles in process engineering, technology development and business segment management. He is the lead inventor on several patents pertaining to different technologies which have been commercialized. He has a bachelor's degree in chemical engineering from Indian Institute of Technology, Kanpur and Master in Chemical Engineering degree from University of Houston.