

# TCE assists India's first integrated rice and biomass bioethanol refinery

By **Randhir Patil** March 3, 2026

Tata Consulting Engineers (TCE) has played a central role in commissioning India's first integrated rice- and biomass-based bioethanol refinery in Odisha, marking a major development in the country's renewable energy sector, Indian Chemical News reported.

The facility brings together first-generation (1G) and second-generation (2G) bioethanol production within a single plant, a first for India. While the 1G unit will produce ethanol from broken rice grains, the upcoming 2G section will use agricultural residues such as paddy straw and wheat straw.

TCE acted as the Owner's Engineer and Project Consultant, providing engineering and project management services from the initial concept stage to commissioning. Its responsibilities included conceptual planning, detailed engineering, procurement support, construction-phase assistance and final commissioning guidance.

The integrated refinery has been designed with a production capacity of 100 kilolitres of ethanol per day. By combining food-grade and agricultural waste feedstocks at one location, the project is expected to support more efficient biofuel production and promote the use of crop residues that might otherwise go unused.

Industry observers describe the refinery as a significant step in India's bioenergy development, offering a model for future biofuel projects. The initiative aligns with national efforts to expand ethanol production, strengthen energy security and promote cleaner fuel alternatives.

With the successful delivery of the project, TCE has reinforced its position in developing complex energy infrastructure projects aimed at supporting India's transition toward renewable and self-reliant energy systems.