

FutureBridge

What is?

Limitations in Syngas production. Can underground coal mines be an innovative alternate?

Traditional coal gasification methods can yield up to 30% less syngas production with heavy metals impurities that can corrode the equipment and degrade syngas quality.

Underground Coal Gasification: A process that converts coal into synthetic fuel or syngas by injecting air or oxygen into coal seams.

Approximately 85% of the world's coal reserves are considered economically unreachable using conventional mining methods. UCG can unlock these reserves by gasifying the coal underground without the need for traditional mining.

Traditional coal gasification processes have

30%

less syngas yields

Traditional coal gasification contributes

80%

more greenhouse gas emissions

Underground coal gasification can increase syngas production by

25%

compared to traditional coal gasification methods

What if?

Underground Coal Gasification: Transforming Coal into Clean Power

According to the National Renewable Energy Laboratory underground coal gasification (UCG) can increase the syngas production by 20-30%.

Linc Energy, is developing gasification systems that produce high-quality synthesis gas for power generation.

Ergo Exergy with its proprietary gasification technology enables cleaner and more efficient coal conversion.

Adoption Expands...

In Queensland, Australia, a UCG pilot produced 6,000 GJ of syngas per day, demonstrating the commercial viability of the process. In China, UCG projects have shown that syngas can be produced at costs competitive with natural gas.

What now?

The BIG questions

If the turnover of syngas sourced from the underground coal gasification potentially reaches US\$ 25 Bn by 2035, then...

- How will underground coal gasification reshape the syngas processing landscape and impact existing mineral processing players?
- Which countries and regions will lead in building ecosystems to advance this technology?
- What role will regulatory compliance play in scaling underground coal gasification globally?

Underground coal gasification has the potential to process

500 Mn tons

coal gasification by 2035

About FutureBridge

FutureBridge is a techno-commercial consulting and advisory company. We track and advise on the future of industries from a 1-to-25-year perspective to keep you ahead of the technology curve, propel your growth, identify new opportunities, markets and business models, answer your unknowns, and facilitate best-fit solutions and partnerships using our platforms, programs, and access to global ecosystems and players.