



# Cost-Effective Catalyst for Powder River Basin Coal Gasification

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## Description of Technology

University of Wyoming researchers have developed an economically sustainable coal gasification process for Powder River Basin or Wyodak low-sulfur sub-bituminous coal using a cost-effective sodium-based catalyst. Coal gasification is used primarily for electricity generation and requires coal, oxygen, steam, and very high temperatures. With the addition of a catalyst, coal gasification becomes more efficient and sustainable by requiring less heat and oxygen.

Sodium carbonate has proven to be an effective catalyst for Wyodak coal that is both cost efficient and disposable (other catalysts require expensive recovery costs). The catalyst is applied via incipient wetness impregnation.

## Applications

This catalytic gasification method is for Powder River Basin or Wyodak coal gasification.

## Features & Benefits

- Effective catalytic gasification
- Cost efficient
- Disposable catalyst
- Abundant supply of catalyst

## Market Opportunity

This technology has the potential to economically and sustainably improve coal gasification for the Powder River Basin region.



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