

i-MILENA an innovative technology for VBC gasification

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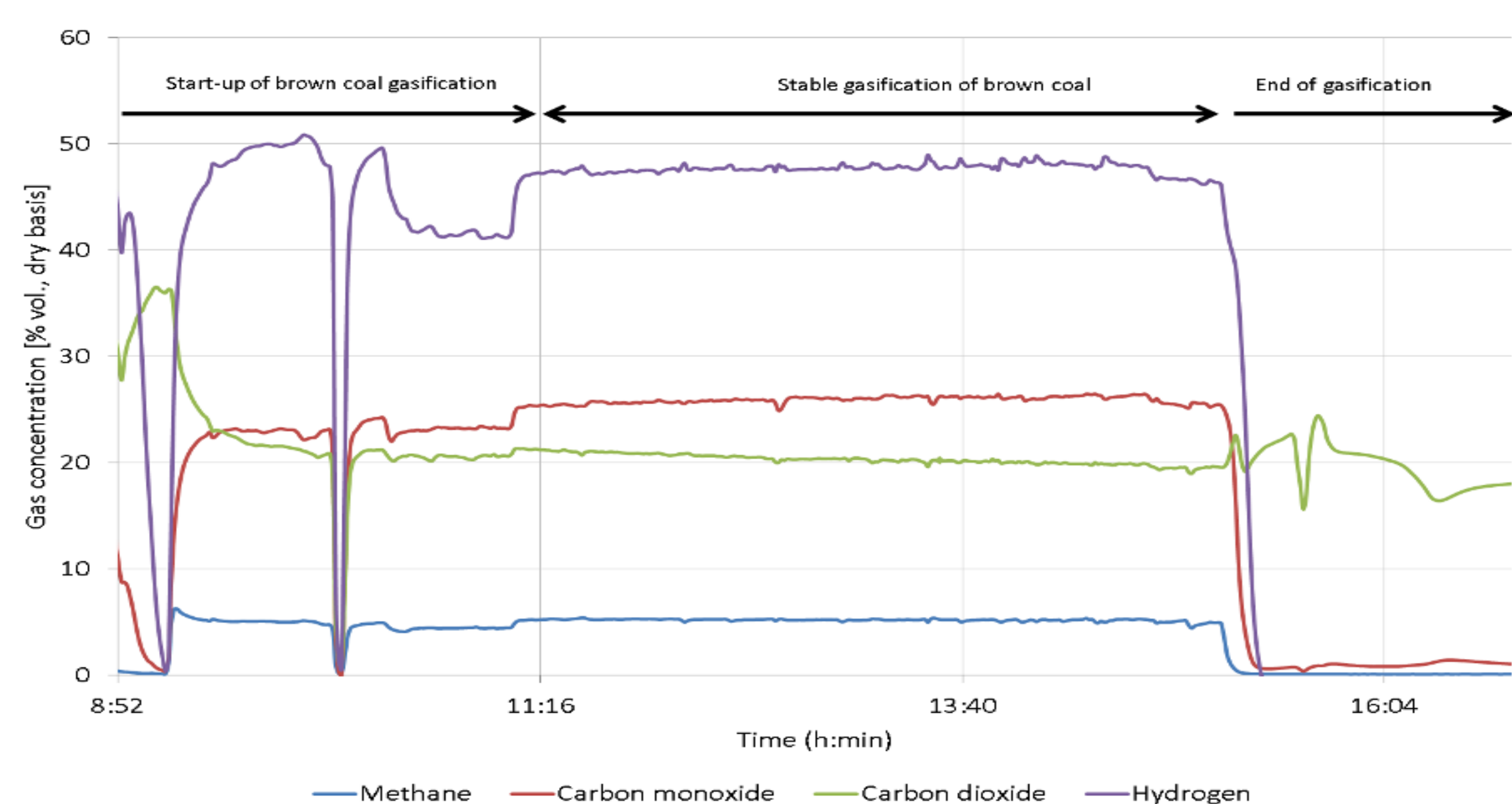


i-MILENA an innovative technology for VBC gasification

i-MILENA is an efficient and versatile technology for converting fuel (brown coal) into medium calorific gas. This work focussed on how the gasification would proceed and what kind of applications are feasible using this technology.

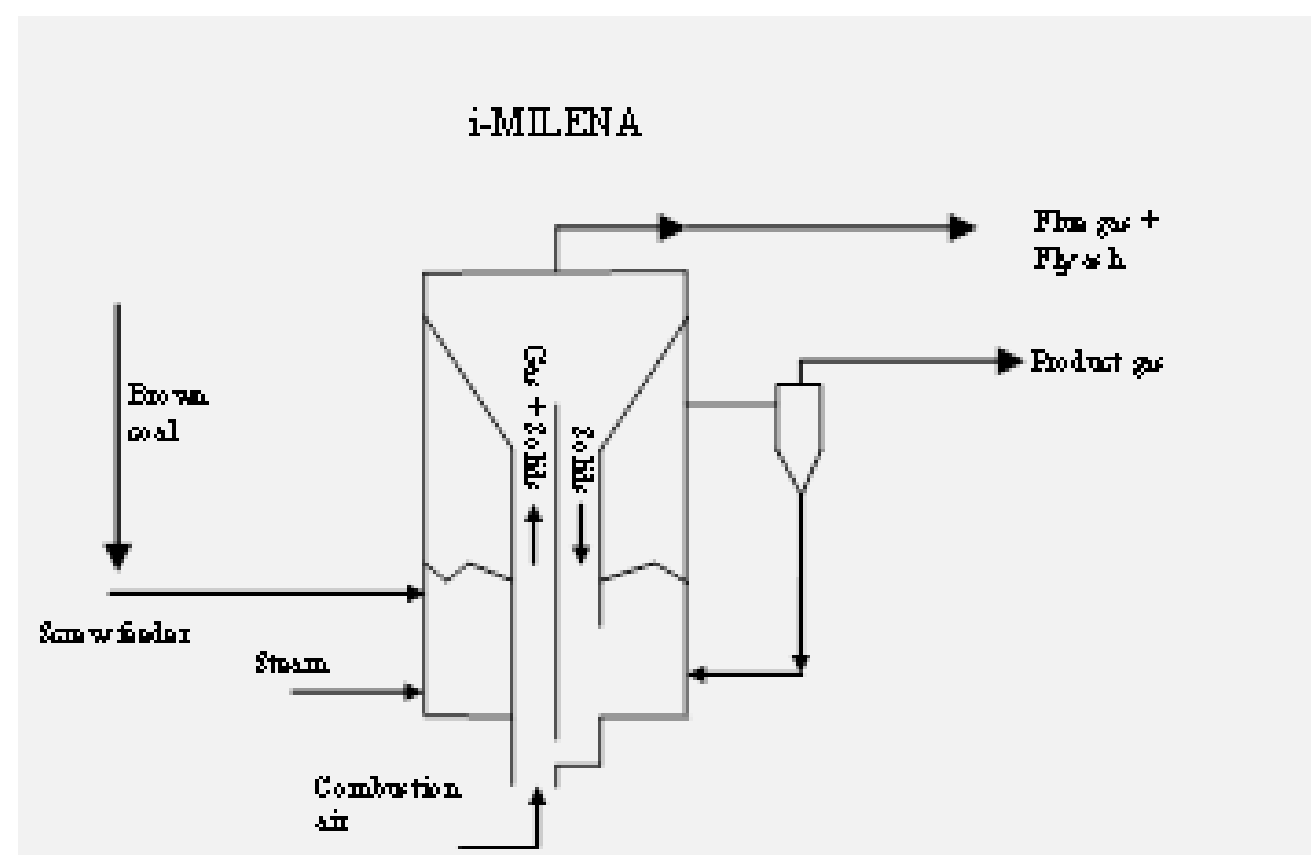
Gasification of brown coal

- Cold gas efficiency on HHV basis 77%
- Large quantity of CO and H₂
- Calorific value of the gas 13 [MJ/Nm³_dry]



i-MILENA gasification technology

- Complete conversion of fuel
- Medium calorific gas
- Highly efficient, even at low temperature



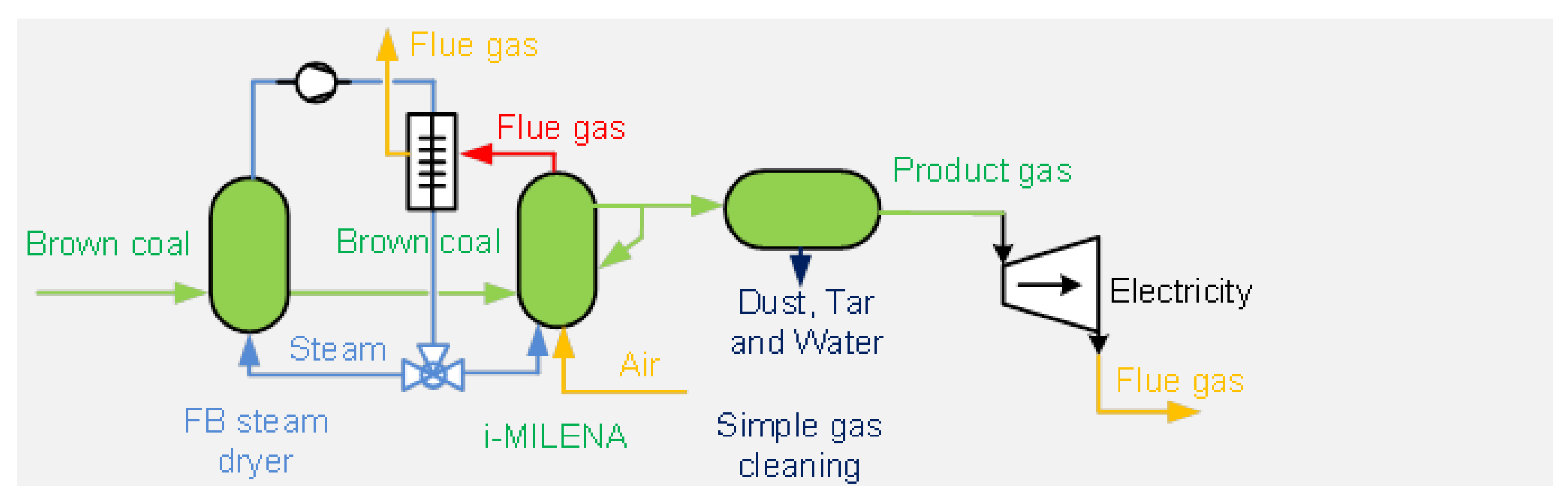
- 4 MW_{th} on Soya Stalk under construction
- 4 MW_{th} on Waste wood planned
- 22 MW_{th} on RDF/SRF planned
- No licensee partner in Australia

Conclusion

- Full conversion of the VBC
- 77% CGE on HHV basis
- 43% efficiency to electricity
- Large increase in economic margin when co-production and synthesis is applied on the product gas
- No ASU needed

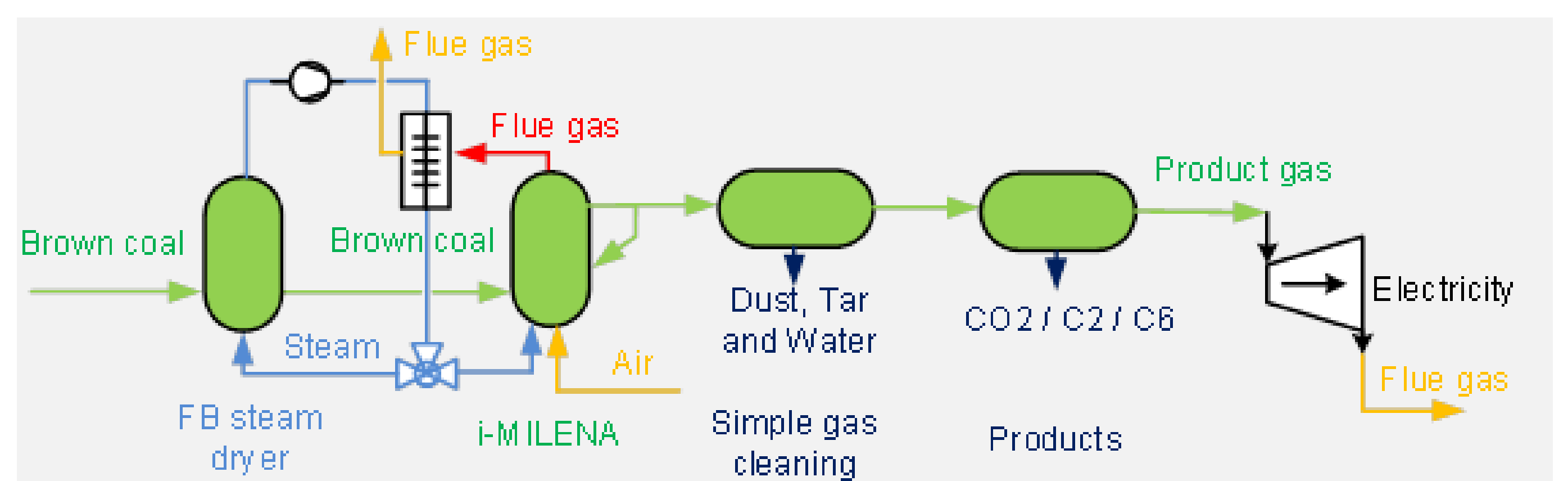
VBC to electricity

- Estimated 43% efficiency to electricity
- Economic margin of 78 AUD/ton_wet_coal



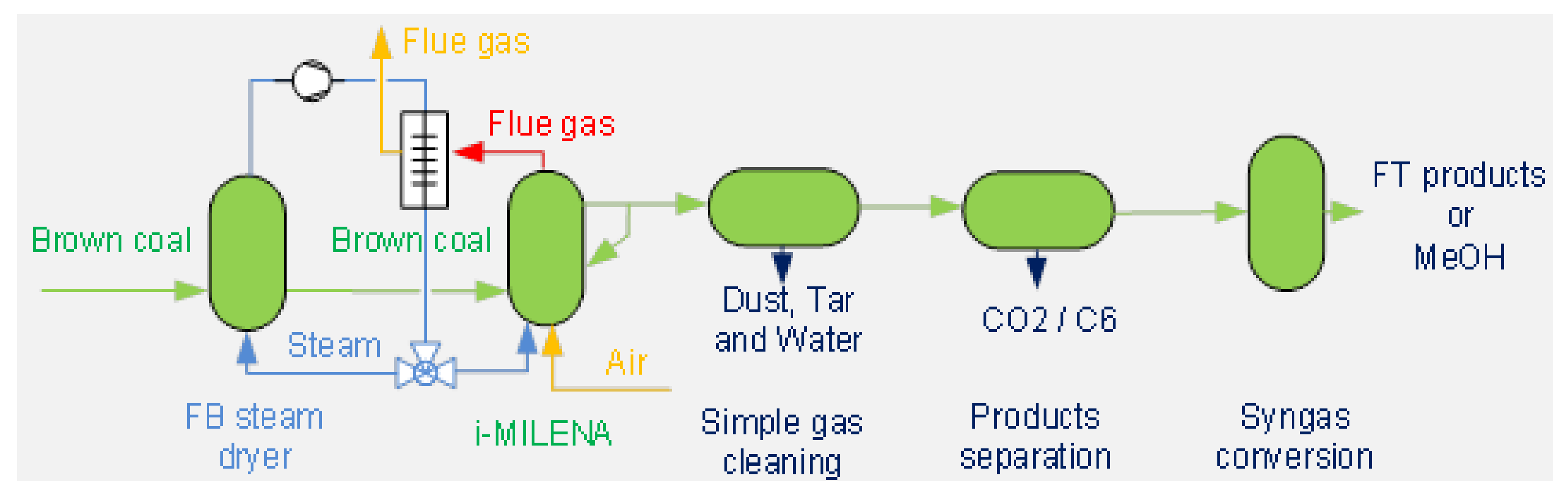
VBC to products

- CO₂, C₂ and C₆ as added value products
- Remaining gas to electricity (efficiency still 37%)
- Economic margin of 100 AUD/ton_wet_coal



VBC to fuel and chemicals

- Low CO₂ emissions
- Added value products such as benzene and ethylene
- Possible to do methanol or FT synthesis
- Large increase in economic margin of 150 AUD/ton_wet_coal



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