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Title: Heat integration for bio-oil hydroprocessing coupled with aqueous phase steam reforming

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1 **HIGHLIGHTS**

- 2 • Pinch analysis was applied to bio-oil hydroprocessing integrated with steam reforming of bio-oil
3 aqueous phase.
- 4 • The effect of steam to carbon ratio in the reformer on minimum energy requirements was
5 evaluated.
- 6 • Energy and CO₂ emission savings achieved *via* heat exchanger network (HEN) designs was
7 evaluated.
- 8 • The impact of the utility cost of incorporated HEN designs on economic viability of the process
9 was evaluated.

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