On the basis of reading of the relevant literature, indicate whether the following statements are true or false and succinctly justify/document your answer.

As stated by Chaar et al. (2015), Brandt and Unnasch (2010) "found that the average operator generates only 40% of its steam from cogeneration".

See Table 4 and text on p. 586.

But did they 'find' or assume this to be the case?

It is a straightforward exercise to confirm the cost equivalences for gas, crude oil and LNG shown in Figure 5 of Chaar et al. (2015).

Crude oil at \[ \frac{\$60}{\text{bbl}} = 5.9 \times 10^6 \frac{\text{BTU}}{\text{bbl}} \] is ok.

But for NG vs. LNG, \[ \frac{13}{6} = 2.17 \] does not reflect only the difference in heat content.

The citation history of the Robinson and Nemrava (2000) paper is very interesting.

What is very interesting about that?

If a citing study published after 2010 were available, its authors would conclude that the relative (or absolute) price trends for both WTI oil and TCPL gas did not deviate from the Robinson and Nemrava (2000) predictions by more than 50%.

\[ \frac{\$25.36}{\text{bbl}} \text{ WTI} \]

\[ \approx \frac{\$2.28 - 2.39}{10^6 \text{ BTU}} \]

\[ \#79.48 (2010) \text{ according to RIA} \]