**Paper details:**

The assignment addresses recovery of gas which otherwise would normally be flared in a natural gas processing plant, and returning the recovered gas back to the processing plant to be used as fuel gas or additional feed stock. In this assignment, you are to look at the LNG (Liquefied Natural Gas) Industry, and such gas discharge and flaring scenarios are usually associated with the following operational activities: 1. plant start up activities, 2. emergency or planned shutdown (turn around) for maintenance, 3. routine flaring (normally during normal plant operations).

Scenarios 1 and 2 above are usually non routine, i.e. intermittent, but large volumes are discharged when they happen. point 3 is regular and already most industries have put plans in place to stop it completely or reduce it to the barest minimum (zero routine flaring by 2030). Focus in this study is therefore scenarios 1 and 2 - a. to evaluate the quantities discharged during each event, including the specific sources of discharge; b. to design the flare gas recovery system.; c. to identify the most technically realistic point to return the gas into the processing plant without disturbing the process and at the minimal cost; Can you run a hysys process simulation to generate some data required to complete this work? As this is quite a specialised area.