

## **ABSTRACT**

*The Natural gas is a one of energy sources that has been used by many industries or retail consumer. People had rather like to use natural gas than petroleum or coal as an energy source because natural gas is more environmental friendly and cheaper in economical consideration. Petroleum and coal have been proven provide a huge environmental pollution.*

*Anyway, there are some obstacles in natural gas utilization. The difficulties of reservation and transportation of natural gas is the main problem in natural gas industry. To solve the reservation and transportation problems, the natural gas liquefaction is the best way. Technology of natural gas liquefaction provides the way to reserve the natural gas 1/600 smaller in volume than in gas form. Basically, this technology covers natural gas liquefaction by using of refrigerant. The natural gas that has been liquefied is called as Liquefied Natural Gas (LNG).*

*Indonesia is one of countries that have the biggest natural gas reserve and the biggest producer of LNG in the world, followed by Algeria and Malaysia. LNG that has been taken from oil or gas field can not be used directly. It must be processed by purification in natural gas plant. PT. Badak NGL is one of natural gas plant that supports LNG business in Indonesia. PT. Badak NGL lies in Bontang , East Kalimantan, founded since 1974.*

*Based on data of by Pelsus of PT. Badak NGL, there was a clue that LNG consumption tend to increase. It was represented by the increase of shipping volume by 1.49% pa. There was a worried with the increasing of shipping volume, the capacity of Pelsus PT. Badak NGL can not serve the shipping activity in 2010. That is for, it is necessary to analyze the recent capacity of Pelsus PT. Badak NGL and the increasing trend of LNG production and shipping volume until 2010. And finally we can determine the capability of Pelsus PT. Badak NGL in serve and support the LNG shipping activity until 2010 and what is the necessary thing to do to optimize the utilization of facilities in Pelsus PT. Badak NGL.*