

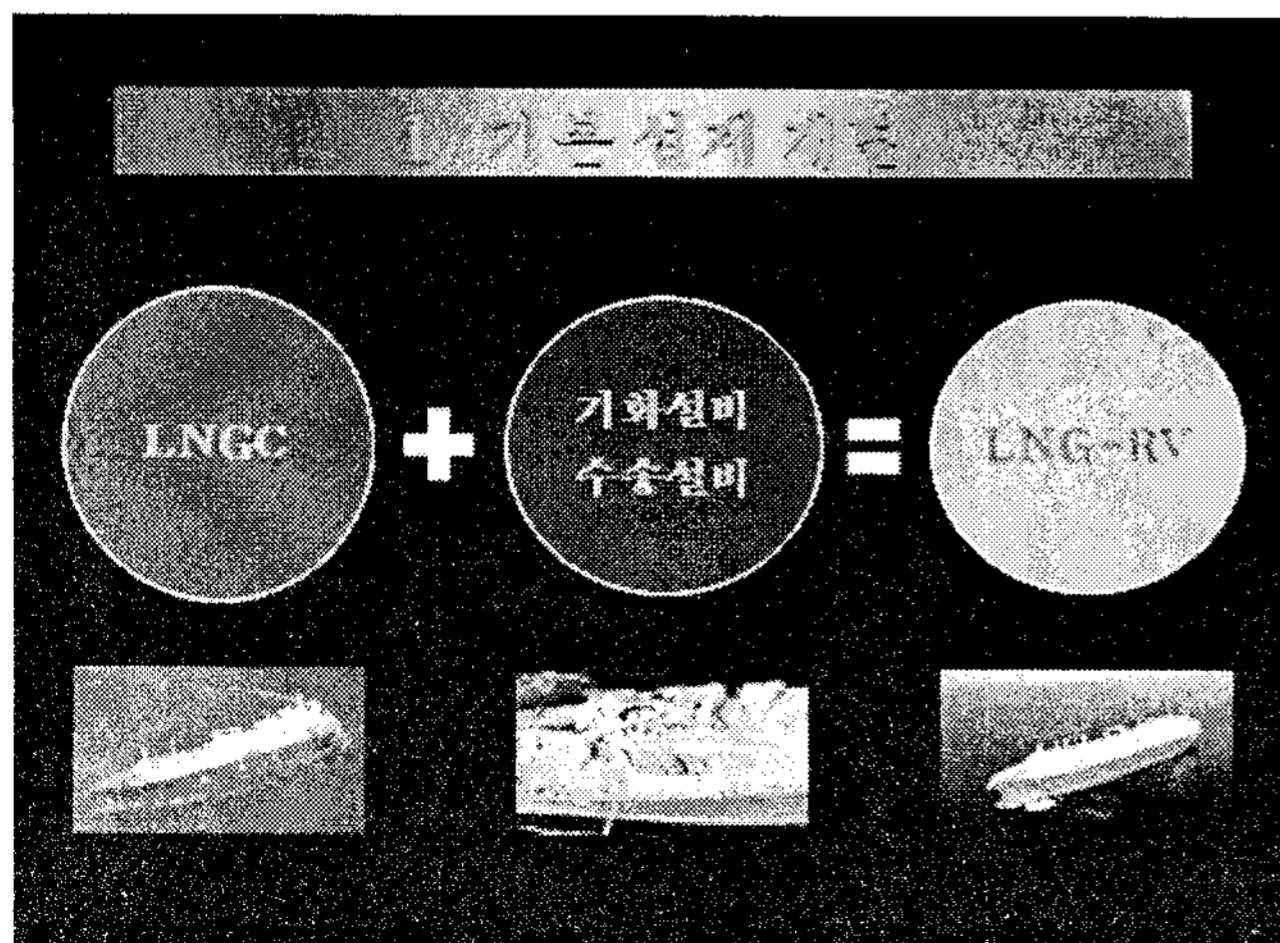
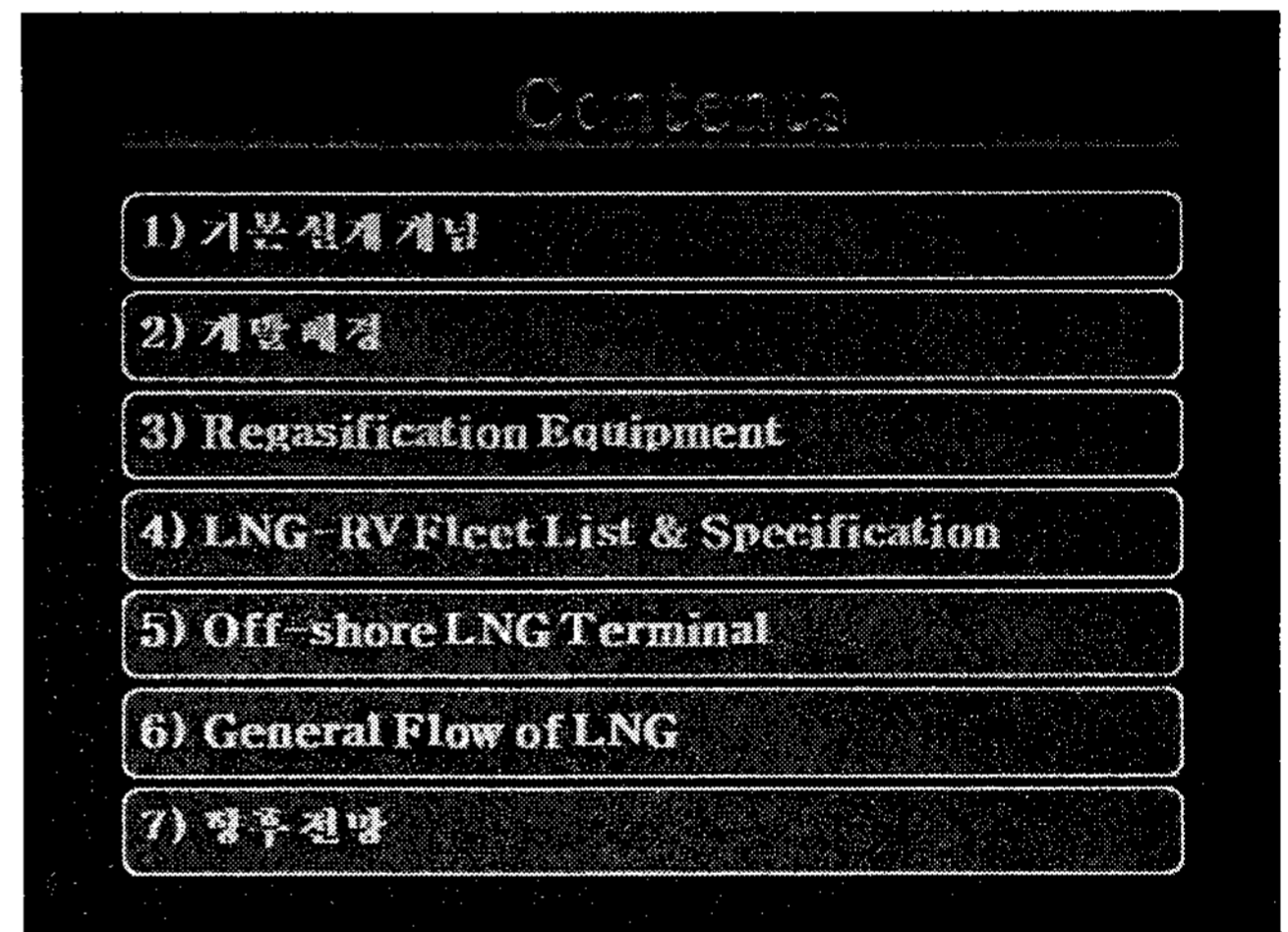
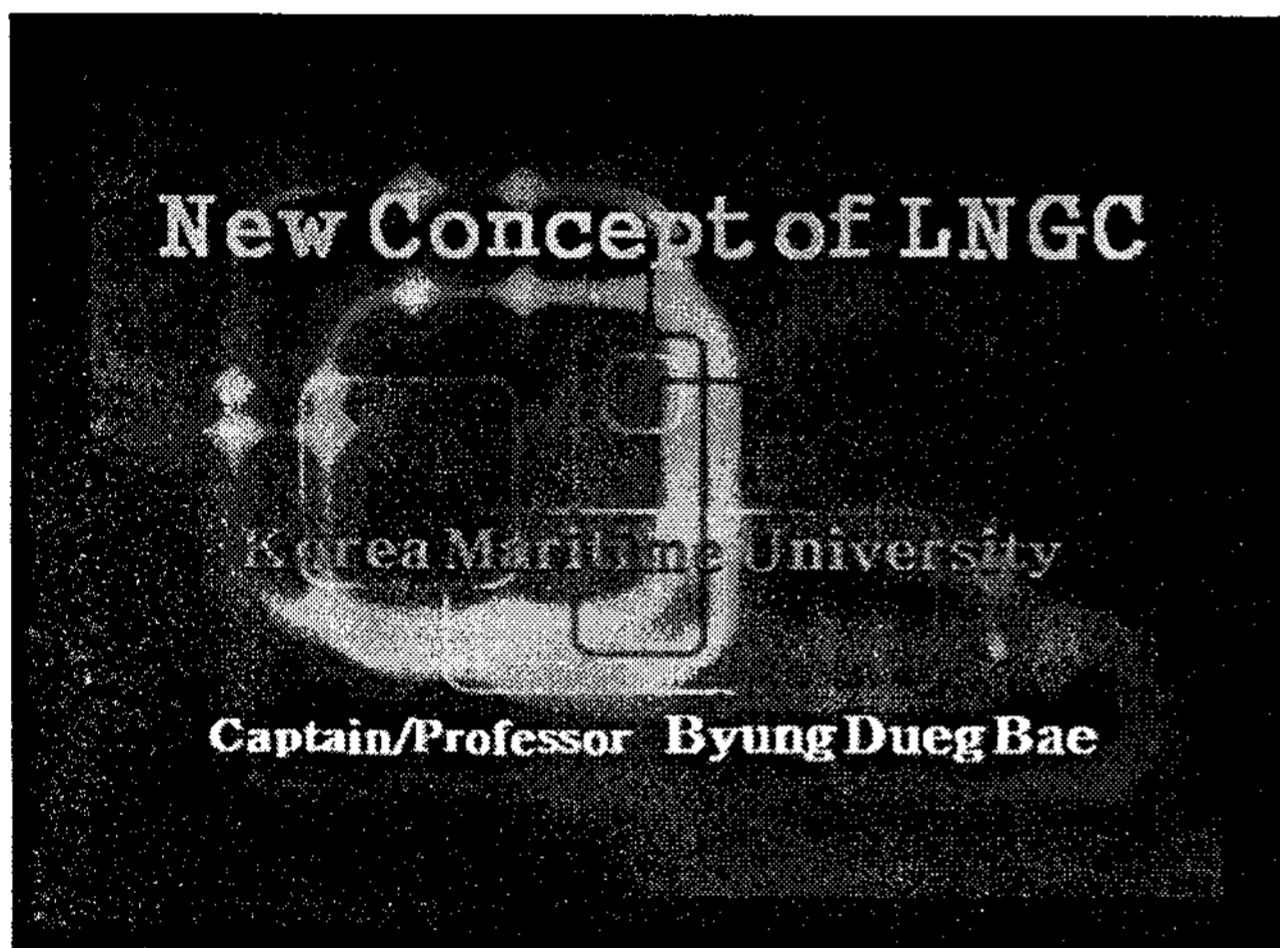
## 신개념 LNG-RV 운반선의 현황

\*배 병 덕

\*한국해양대학교 부교수/실습선 한나라호 선장

요 약 : 최근 엘엔지운반선(LNGC)은 선체의 대형화, DFDE디젤엔진탑재, 재액화설비등의 변화와 함께 해상터미널의 역할을 동시에 할 수 있는 LNG-RV(Regasification Vessel)의 출현을 경험하였으며, 이러한 신개념의 선박의 개발개념, 운항방식 등에 대하여 살펴보도록 한다.

핵심용어 : LNG-RV(Regasification Vessel), Deep-sea Port, H.P Pump, Vaporizer, STL(Submerged Turret Loading), MAPS



### 3) Regasification Equipment

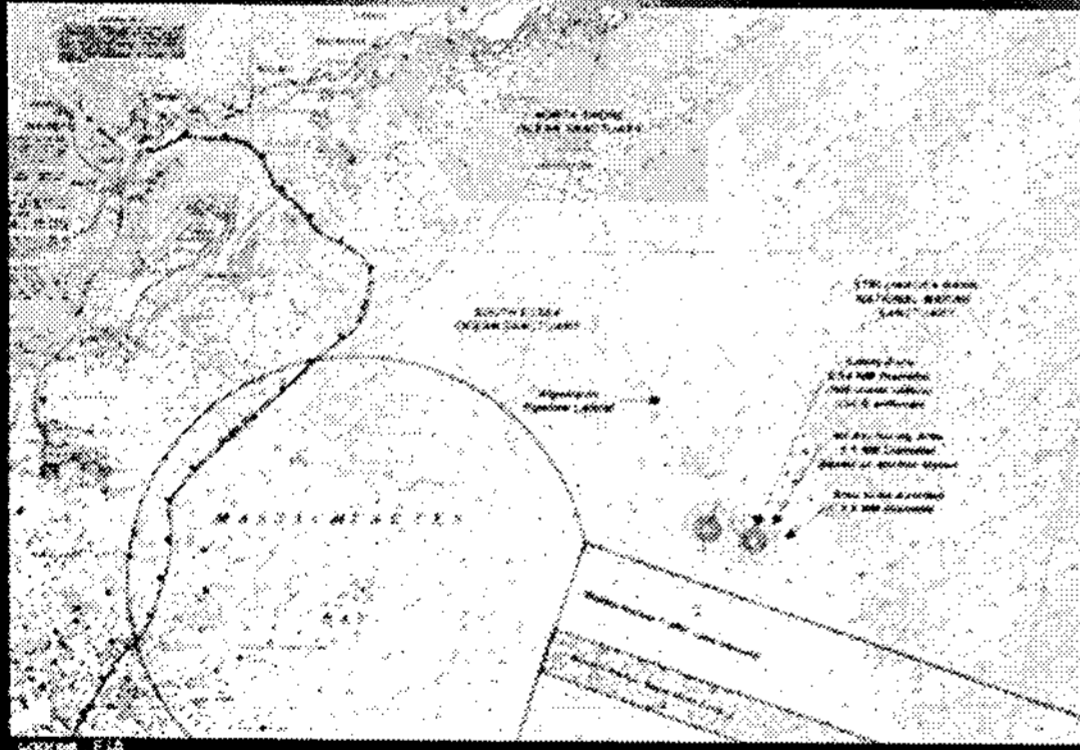
- Suction Drum**
  - 11.5 bar로 H.P. Pump에 LNG 공급
  - 14 m<sup>3</sup>, 11.5bar, 1set
- H.P LNG Pump**
  - 11.5 bar—134 bar로 가압 H.P Vaporizer로 송출
  - 205 m<sup>3</sup>/H x 2,370 meter, 5 sets
- H.P Vaporizer**
  - 해수로 직접 가열, 수평경사 10° 유지
  - -163℃→-4.4℃(6 Mega Watt, 6sets)
- Metering Unit**
  - Vaporizer로부터 공급된 NG양을 측정 STL로 이송
  - 34 ~ 4000mmscfd, Ultrasonic type
- STLS**
  - 본선과 해상용 BUOY와의 연결장치 Submerged Turret Loading System)

### 4) LNG-RV Fleet List

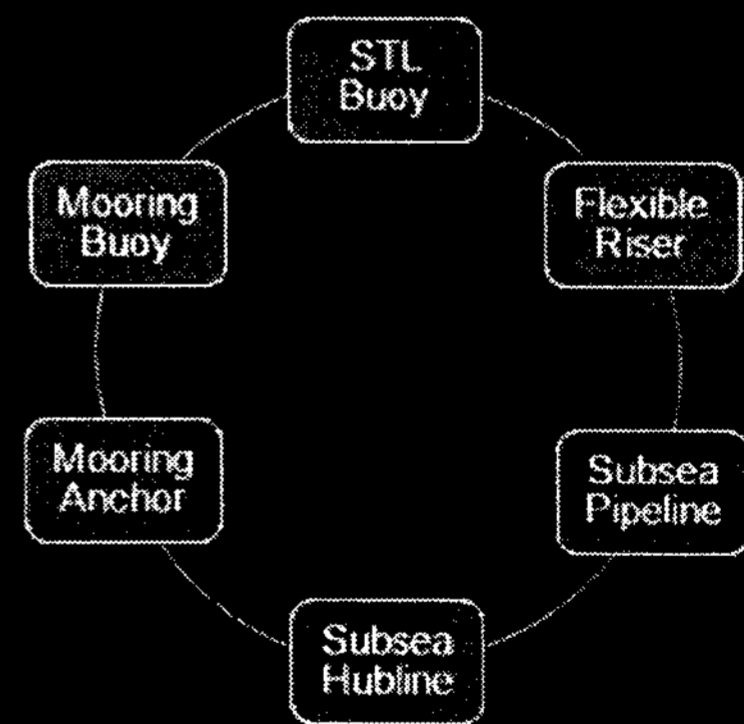
Builder	Name	Owner	Operator	Capacity	Type	Delivery	Engine
	Excelsior	Exmar		138,000		Jan. 2005	
	Excellence	GKFF		138,000		May. 2005	
	Excelsior	Exmar		138,000		Oct. 2006	
Daewoo (DSME)	Explorer	Exmar/Excelerate	Excelsior Energy	150,900	GTT96	Mar. 2008	STB
	Express			150,900		May. 2009	
	Exquisite	150,900	Sep. 2009				
	Expedient	150,900	Nov. 2009				
	Exemplar	150,900	June. 2010				

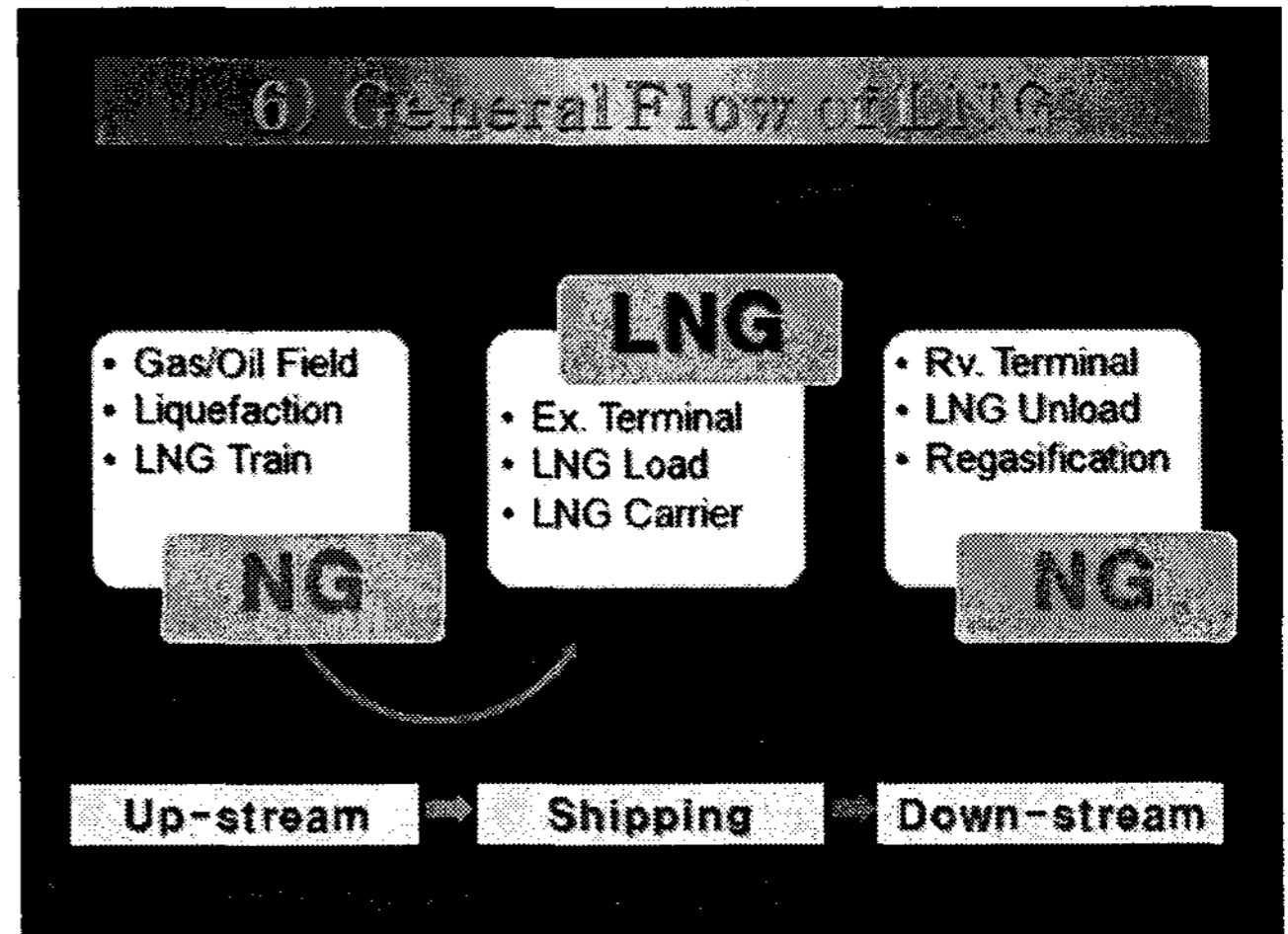
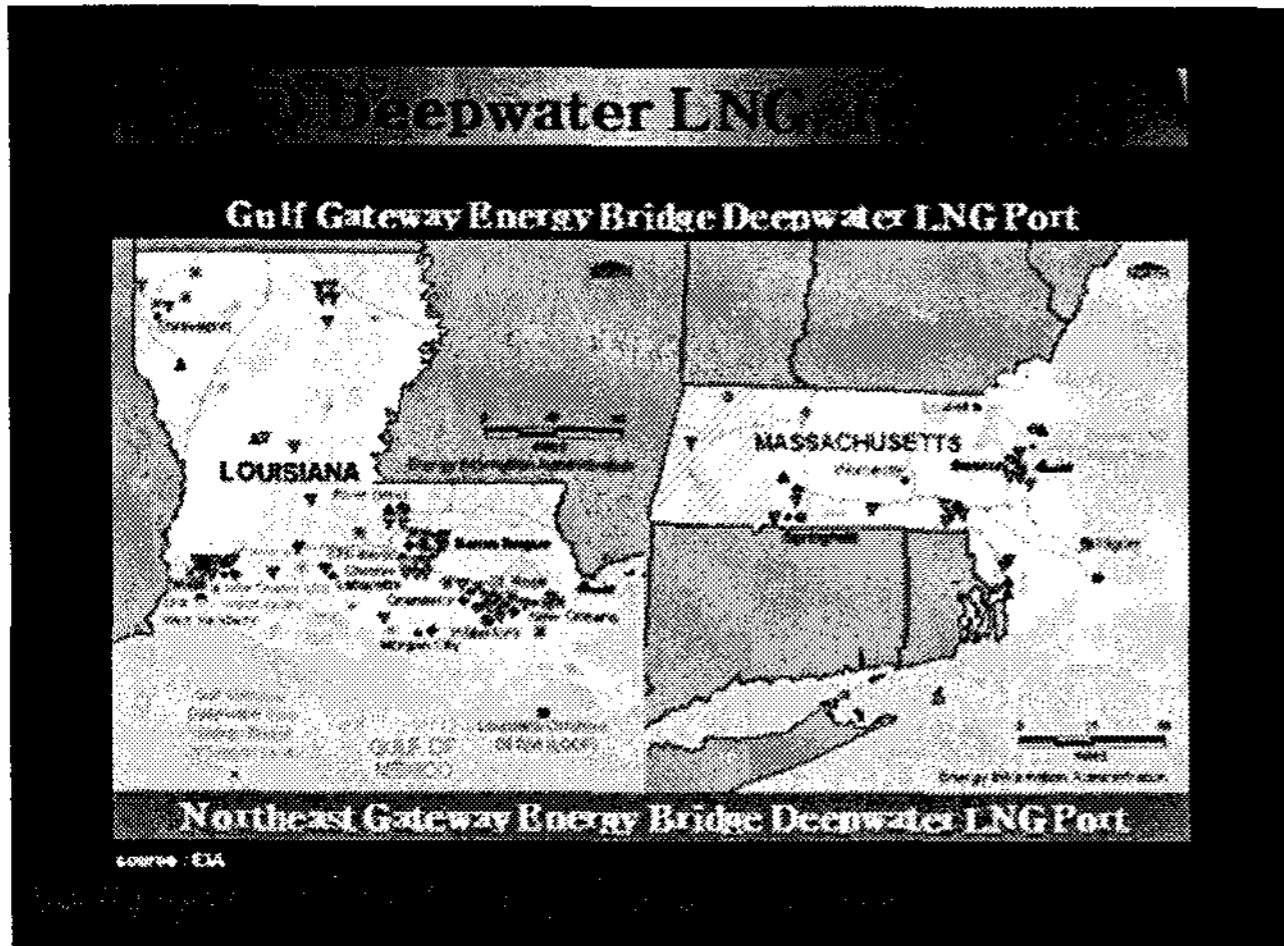
Source: Excelsior Energy

### On-shore LNG Terminal

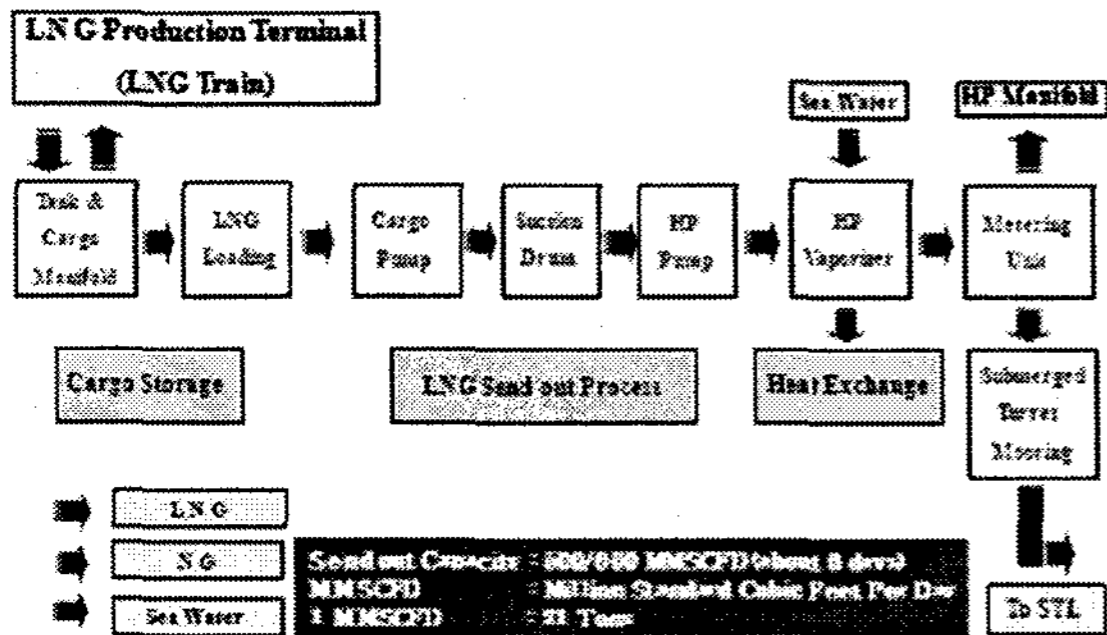


### Off-shore LNG Terminal





### 6) LNG-RV Unloading Process 1



source: DIME

