



Gas recovery

Gas recovery

- ✓ Provide complete sets of equipment and operation services for the recovery of oilfield gas, coalbed methane, biogas and scattered gas
- ✓ MRC (mixed refrigeration) process standardization movable integrated skid mounted LNG unit
- ✓ Customized processing scale can meet the processing demand of 10,000 to 2 million m³ / day

LNG

Low temperature liquid storage is the main gas recovery scheme at present. It can be used after gasification, pressure regulation and metering

High pressure gas storage, suitable for short distance transportation and less gas emission wells. It can be used after decompression, pressure regulation and metering

CNG



Gas recovery



- MDEA aqueous solution is used to remove CO_2 from the feed gas in the integrated equipment of pretreatment and purification, and the acid gas is desorbed by depressurization heating after adsorption



- Utility integrated equipment includes instrument air and desalting water system. The split skid design makes the movement and transportation more convenient



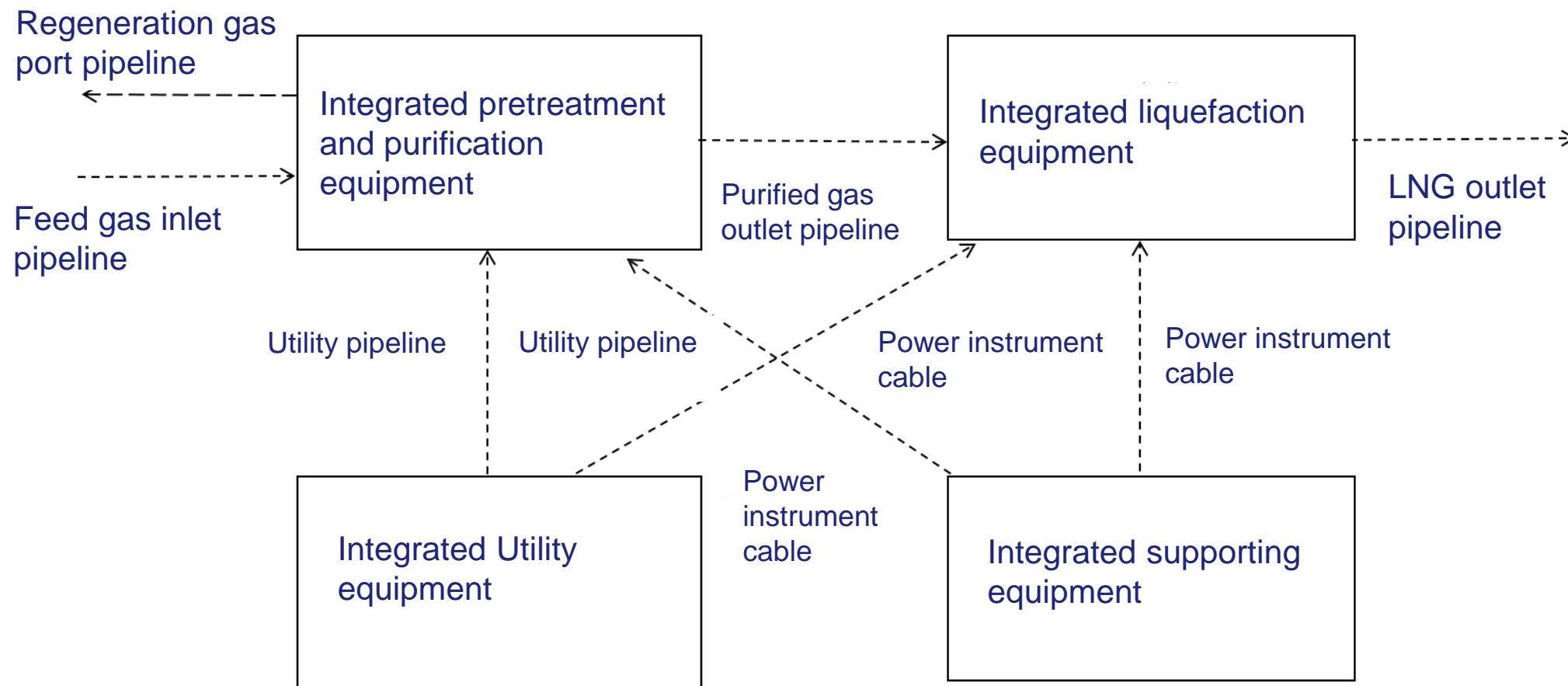
- MRC liquefaction process is adopted in the integrated liquefaction equipment, which uses mixed refrigerant, exchanges heat with gas in the cold box, adopts two-stage refrigeration gas liquefaction technology with lower energy consumption



- The integrated complete set of supporting facilities adopts the domestic advanced DCS automatic control system to form a set of advanced automatic control system integrating safety, production and management, so as to realize the high automation of the device

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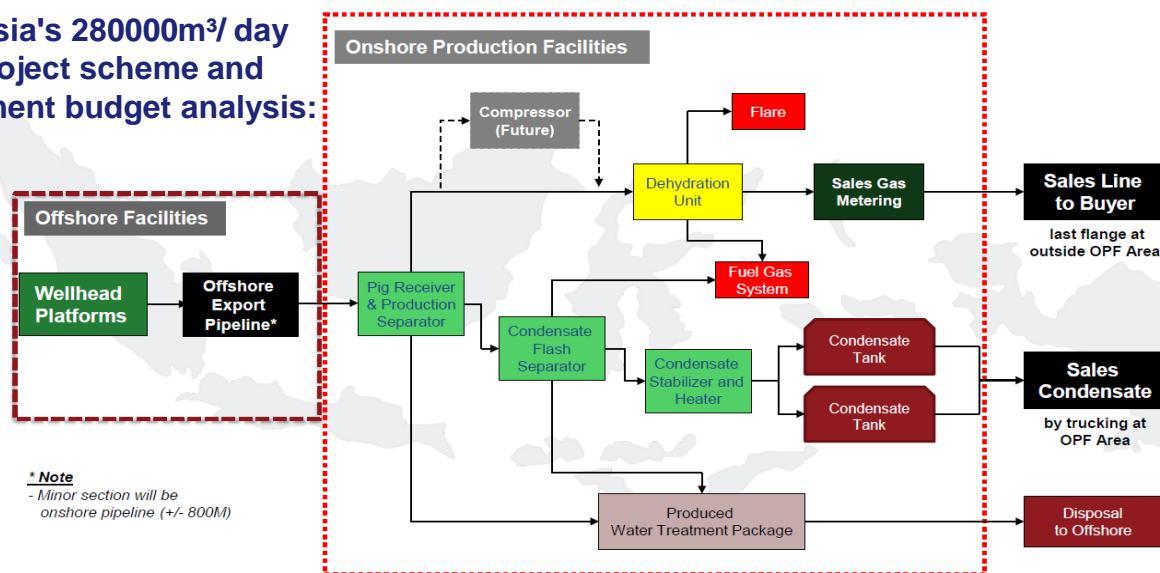
Processing flow:



After transportation to the site, only four integrated complete sets of equipment need to be connected, which greatly reduces the on-site construction work, shortens the construction period of the device and saves the on-site construction cost, and there is no hot work.

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Indonesia's 280000m³/ day LNG project scheme and investment budget analysis:



*** Note**
- Minor section will be onshore pipeline (+/- 800M)

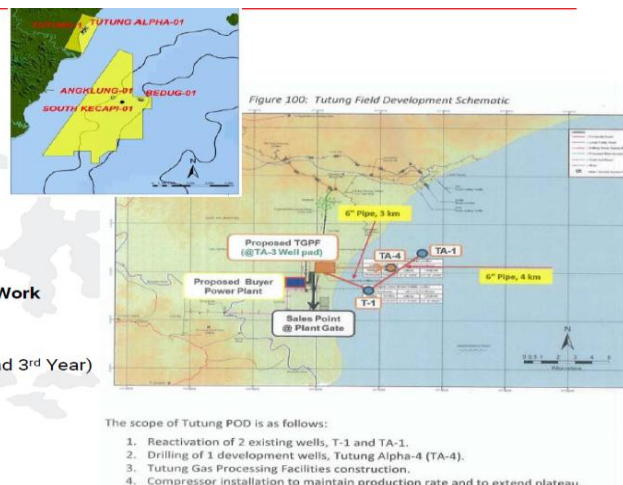
- Province : East Kalimantan
- Regency : East Kutai
- Participating Interest : - Starborn Energy Bontang Pte. Ltd. (80%)
- Starborn Petroleum Limited (20%)
- Starborn Energy Bontang Pte. Ltd. (Area : 427.2 km² - relinquished)
- Operator : Starborn Energy Bontang Pte. Ltd.
- Contract Period : 30 December 2003 – 29 December 2033
- POD I Approval : 29 June 2015 (By MEMR)
- POD I Extension : 29 June 2022 (By MEMR)
- Production Field : Tutung (10 MMSCFD)
- Resources and Reserves :

Lapangan	OGIP (Unrisked) (BSCF)	Cadangan P1 (BSCF)	P2 (BSCF)	Kum. Prod (BSCF)	Sisa Cadangan P1 (BSCF)	P2 (BSCF)
Tutung	86.93	27.30	59.63	0	27.30	59.63

Firm Commitment (first 3 years) and Work Commitment (second 3 years) Work Programs:

- G&G Study (Firm Commitment of 1st, 2nd, and 3rd Year)
- 2D Seismic Acquisition and Processing (Firm Commitment of 1st, 2nd, and 3rd Year)
- Drilling of 1 exploration well (Firm Commitment of 1st, 2nd, and 3rd Year)
- G&G Study (Work Commitment 4th, 5th, and 6th Year)
- 3D Seismic Acquisition and Processing (Work Commitment 4th Year)
- Drilling of 1 exploration well (Work Commitment 4th, 5th, and 6th Year)

All Firm Commitments and Work Commitments has been conducted.



印尼LNG项目经济性初步分析表

类别	序	内 容(规模28万方/天)	金 额(人民币元)	备注
投资	1	LNG 装置	1000.00	
	2	设备运输	100.00	
	3	现场安装(施工、安装及材料)	100.00	
	4	土建	100.00	
	5	消防	100.00	
	6	发电机	100.00	
小 计			1500.00	含税
运营	1	人工	100.00	定员80人
	2	试剂耗材/设备维护保养费用	100.00	
	3	其它费用(站内办公费用、车辆等)	100.00	
小 计			300.00	
回报	1	年折旧	11.43	按7年折旧
	2	年运营成本	100.00	
	3	年成本	111.43	年折旧+年运营成本
	4	日处理气量(万)	1.00	额定设计
	5	年工作时间(天)	333	额定设计
	6	原料气价(元/万)	143	元/万, 按汇率6.4571计算
	7	原料气年成本(元)	158.20	
	8	年产LNG(t)	21.00	按产能算
	9	LNG均价FOB Bontang(元/t)	19.500	按均价6.21225美元/MMBTU计算
	10	年销售	409.50	
	11	年毛利	250.77	收入-成本(折旧、运营、原料)
	12	毛利率	61%	年毛利÷年销售
	13	年投资回报率%	19%	年毛利÷投资
	14	每方气毛利	9.08	年毛利÷年用气量
	15	每方气摊销投资	52.38	年折旧÷年用气量

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development between human and environment**

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