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Eliminating Continuous Flaring from the Oil Production Facilities

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Speaker Introduction

NUR JANNAH ABDUL WAHID, CEng MIChemE



- Group Technical Solutions, PETRONAS
- Staff Engineer (Process Design)
- 16 years of experience in brownfield & greenfield projects, plant troubleshooting, improvement studies, and baseline assessments
- Past Projects: Gas processing & treatment, sulphur recovery, oil production, specialty chemicals
- Current Projects: Circular Economy, TGTU



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Presentation Outline

- Introduction
- Background
- Approach
 - Step 1 - Identify and Evaluate the Sources of the Gas
 - Step 2 - Identify Possible Options
 - Step 3 - Select the Best Options
- Conclusion
- Key Takeaways

Introduction - GHG Emissions

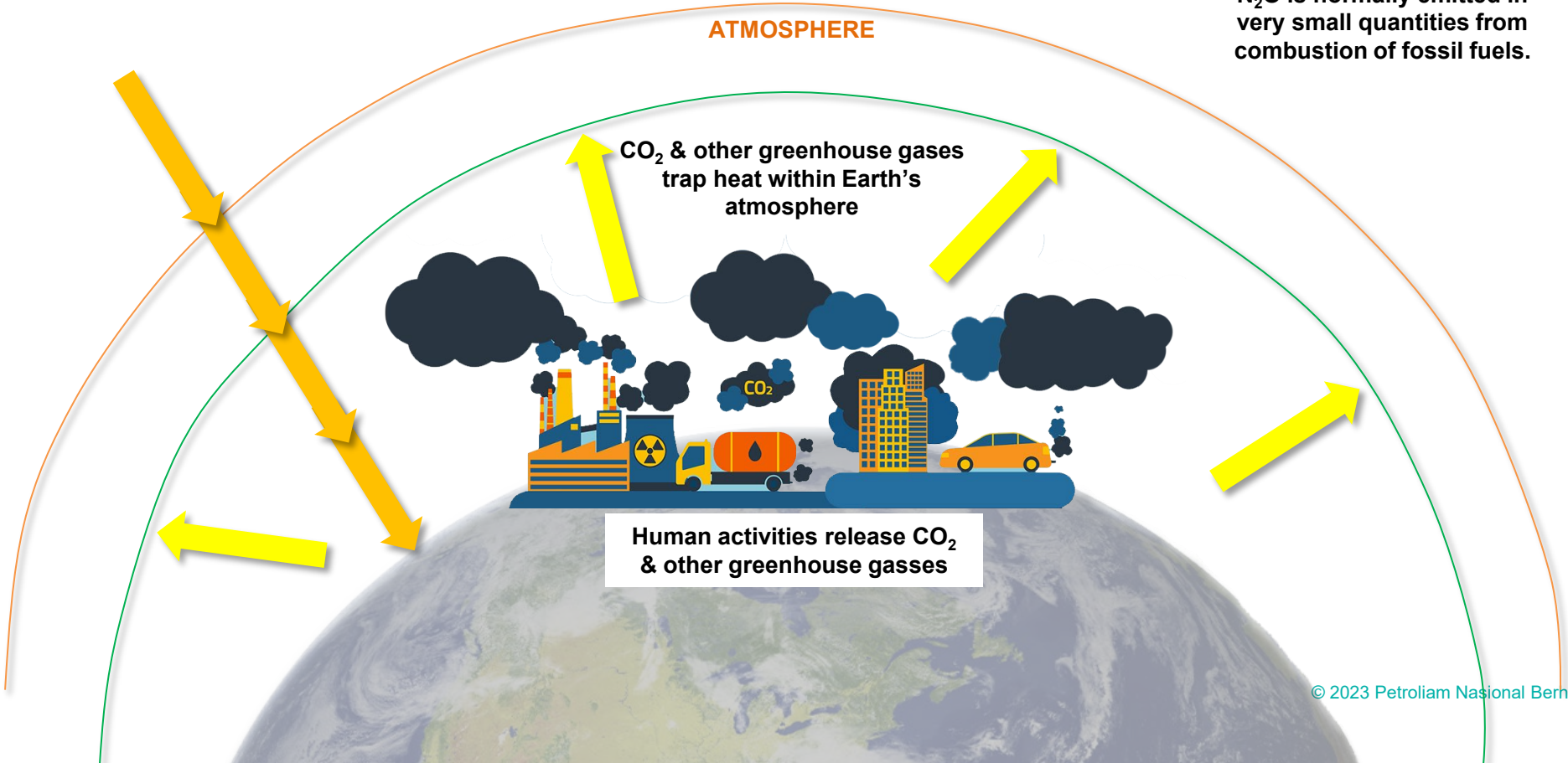


IPCC defines GHGs as “gases constituents of the atmosphere, both natural and anthropogenic (caused by human activities), that absorb and emit radiation at specific wavelengths within spectrum of thermal infrared radiation emitted by earth’s surface, the atmosphere and by clouds.

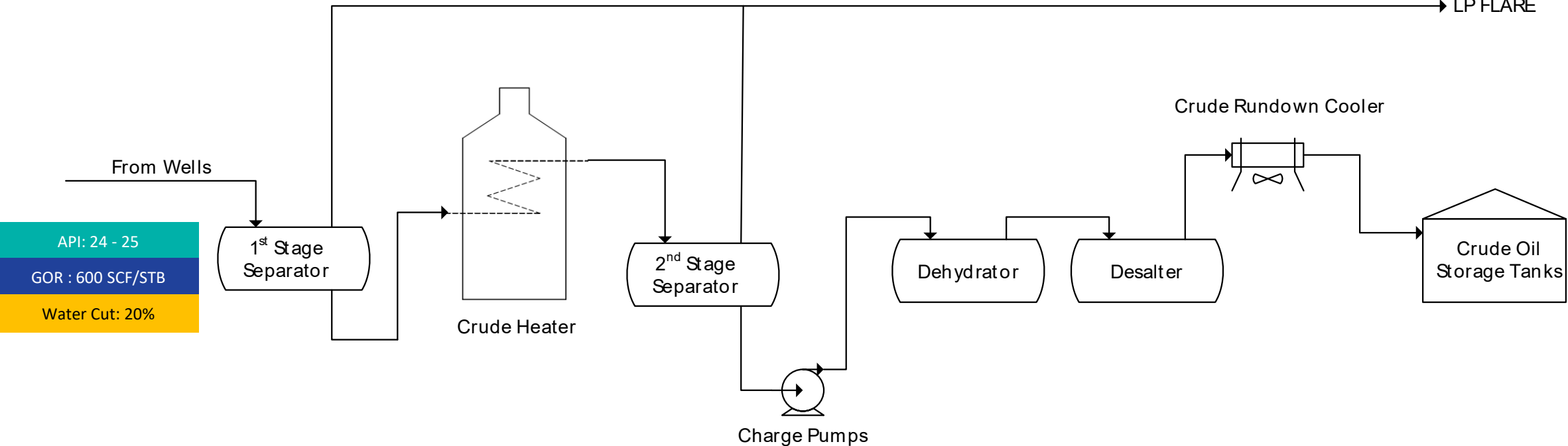
GHGs commonly reported by Oil & Gas Industry

- CO₂
- CH₄
- N₂O

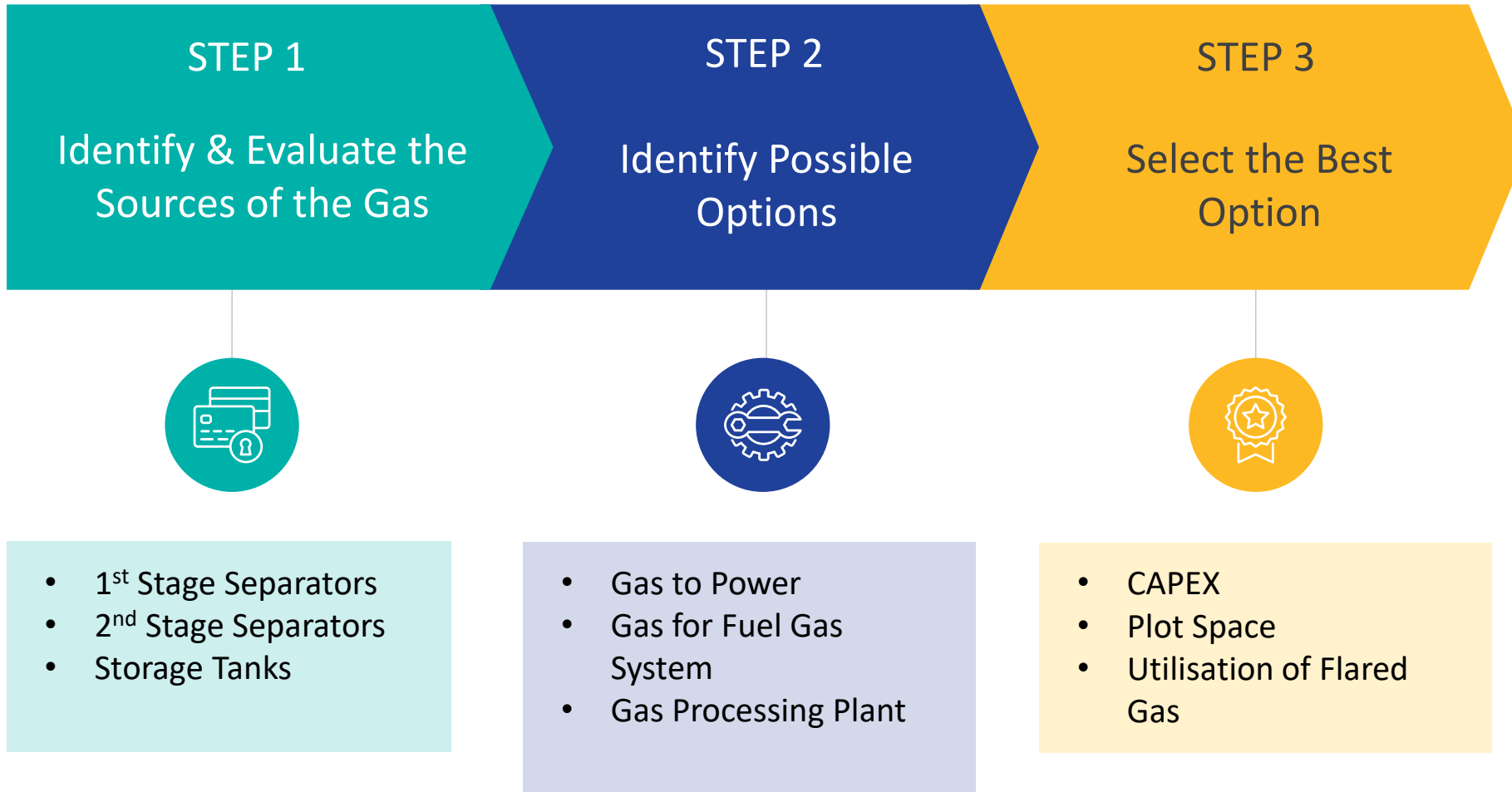
N₂O is normally emitted in very small quantities from combustion of fossil fuels.



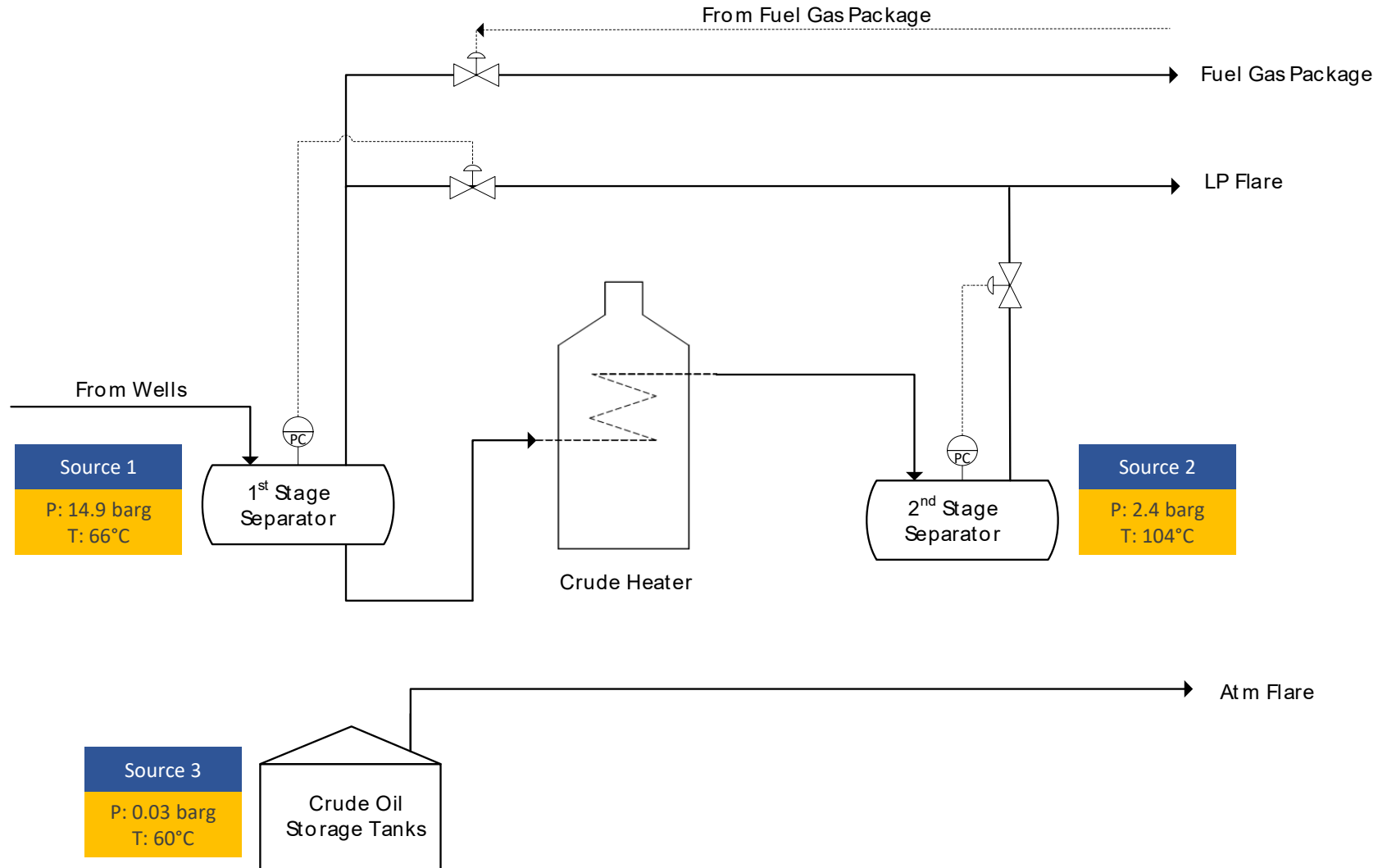
Background



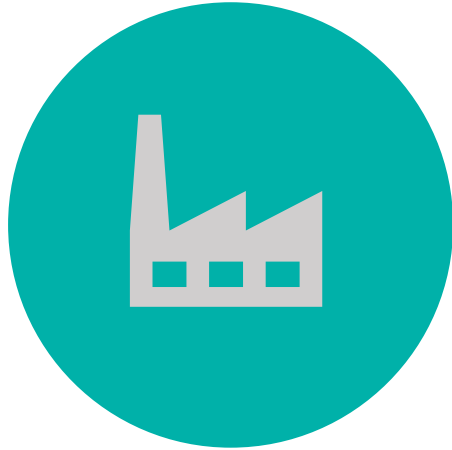
Approach



Step 1: Identify & Evaluate the Sources

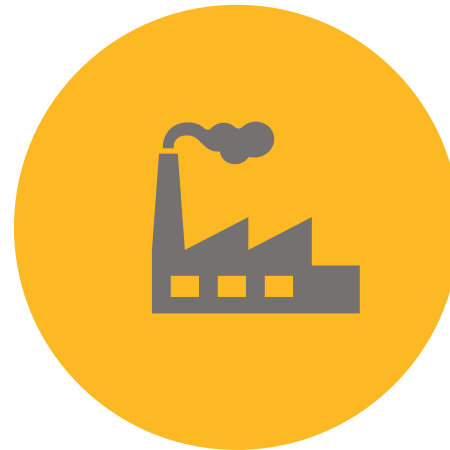


Step 2: Identify Possible Options



GAS TO POWER

- Treat the gas through removal of heavy HC and water to meet GT feed gas specification
- Treated gas used as Feed for **Power Generation**



GAS FOR FUEL GAS SYSTEM
















- Treat the gas through removal of heavy HC and water to meet fuel gas specifications
- Treated gas used as Fuel for **Internal Consumption** (Production Facility)



GAS PROCESSING PLANT

- Gas Pre-Treatment and Series of Distillation: **Sales Gas and LPG**
- Product will be evacuated to customer

Step 3: Select the Best Option

	GAS TO POWER		GAS FOR FUEL GAS SYSTEM		GAS PROCESSING PLANT	
CAPEX		LOW		LOW		HIGH
FOOTPRINT		SMALL		SMALL		LARGE
COMPLEXITY		LOW		LOW		MED-HIGH
EVACUATION		100%		100%		100%
MONETIZATION		YES		NO		YES

Conclusion

One of the possible option to eliminate continuous flaring from Oil Production facilities is through **Gas to Power**



Low CAPEX



Low in Complexity



Small Footprint



Able to Eliminate Continuous Flaring

Key Takeaways

Gas to Power could **eliminate continuous flaring** in Oil production facilities which can be replicated to similar oil production facilities.

However other options as discussed can also be considered depending on:

Availability of Plot

Demand of the Product (Treated Gas)

Special Thanks



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