



## GTL Micro channel technology



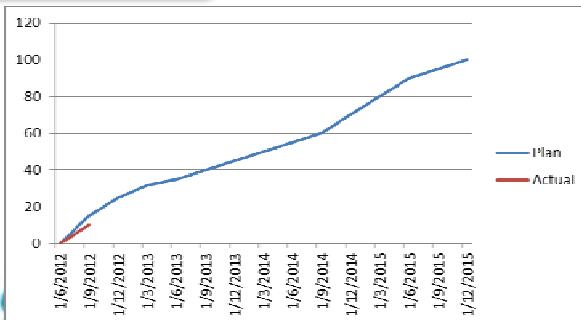
### Problem/Reason :

- There are many associated gas was released to flare around the world.
- This small amount of associated gas are not feasible to making the pipeline for transportation.
- How to make such a small-scale or mid-scale GTL plant feasible and cost competitive?

### Target:

- Construct GTL mobile unit to convert the gas to liquid fuel using GTL.

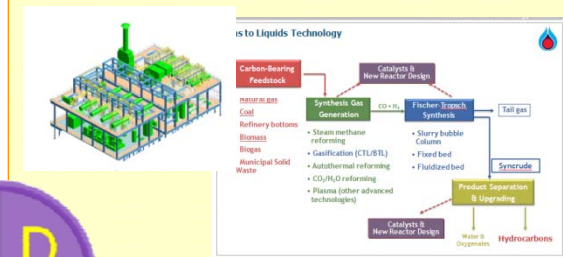
### Progress:



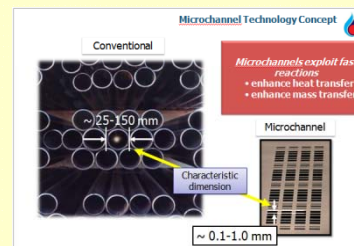
Study the technology to convert the associated gas to liquid fuel.



Preliminary design of the GTL plant



Re-design process and the technology by Microchannel Reactor



Feasibility study the project with conventional GTL process

### Competing NG Investment Economics

Case study after Hobbs & Adair (OGI 2012)

	LNG to Europe	LNG to Asia	Methanol	GTL
NG Price	\$4.03/MMBtu			
Product Sales Price	\$10.52/MMBtu	\$14.66/MMBtu	\$397/tonne	\$16.99/bbl
\$/MMBtu Gas Processed				
Revenue	9.48	13.31	13.23	11.70
Shipping	-1.00	-2.80		
CAPEX + OPEX	-3.50	-2.50	-0.31	-5.40
Netback	5.98	7.91	3.31	6.31
NET PROFIT	1.95%	3.88%	-0.95%	2.18%

### Result

- Obtain the suitable technology for associated gas.

### Next Plan

- Front End Engineering Design package for ITB package EPC bidding