Designing for Diverse Market Needs

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Air Products
Optimal Train Capacity

• Objective
  – The lowest cost per tonne of LNG

• Two types of constraints
  – Technical
  – Non-technical
    • Feed gas source
    • Site conditions
    • Market needs and offtakes
    • Regulations
Technology Advancement

Train capacity MTPA


Today’s technical envelope

Frame 5
PT Arun

Frame 7 Hyd. Turbine
MLNG Tiga

SplitMR
RasGas II

AP-X
QatarGas II

AP-C3MR
Brunei

AP-SMR
Libya

AP-N
U.S.
## Technical Envelope Today

<table>
<thead>
<tr>
<th>Process technologies for small, midscale and large plants</th>
<th>Diverse drivers and configurations</th>
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Finding the sweet spot

Feed gas sources
- Process technologies for small, midscale and large plants
- Various N2 rejection and He recovery technologies
- FLNG

Market needs and offtakes
- Diverse drivers and configurations
- Flexible build and construction strategies: modular vs. stick built
- Adaptations for harsh environment and off-shore

Site conditions
- Various pretreatment technologies
- Vast experience of EPCs and technology providers
- Standard designs

Regulations

Technical Envelope Today

Market needs and offtakes

Feed gas sources
Critical steps to a successful project

Screening
- The most important first step!
- Define and understand the constraints and critical success factors
- Involve the right participants

Pre-FEED
- Finalize technology selection and BOD

FEED
- Develop plant design
- FID

Bigger is not always better. More is not always better. And one size certainly does not fit all.
Thank You