

Refrigerant grade IsoButane (R-600a)

INVESTMENT OPPORTUNITY SCORECARD

CHEMICALS

Aug 2021

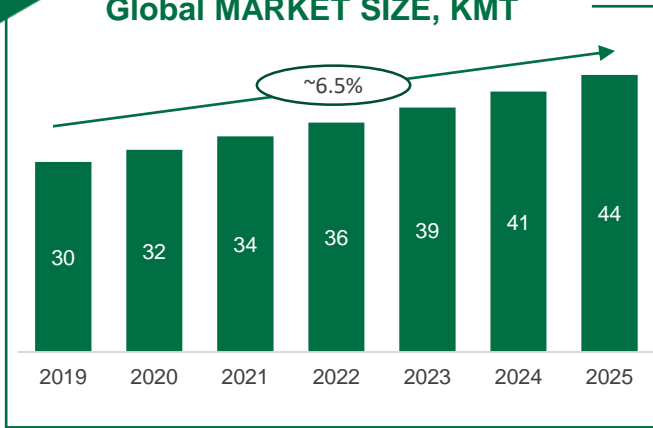


Refrigerant grade IsoButane (R-600a)

OPPORTUNITY DESCRIPTION: Opportunity to setup Refrigerant grade IsoButane (R-600a) manufacturing facility of 5 KMT in KSA to cater global demand

DEMAND

Global MARKET SIZE, KMT



INVESTMENT OVERVIEW

INVESTMENT HIGHLIGHTS

- Expected investment size of USD 3 Mn
- Plant capacity: 5 KMT
- Expected IRR: More than 12%

VALUE PROPOSITION

- KSA is one of the largest chemical producers in the world and contributes ~10% to the global output
- KSA is strategically located at the crossroads of several markets that have high demand for chemical products
- KSA benefits from having an abundant access to raw materials and a high standard of infrastructure that is continuously being improved upon
- Opportunity for first mover advantage due to non-existent local production of Propionic Acid and lack of competition from major global manufacturers
- This opportunity has a strategic alignment with vision 2030 and National Industrial Strategy by supporting many sectors such as automotive and food and beverage

KEY DEMAND DRIVERS

- The expected growth in demand for refrigerant grade IsoButane is driven by the increase in the domestic and regional refrigerator and freezer appliance production (domestic refrigerators, commercial refrigerators, vending machines and small appliances, industrial refrigeration)

MARKET OVERVIEW

GLOBAL TRENDS

- Since the ratification of the Kyoto Protocol, Europe, Japan and most other countries (excluding the US) have migrated to isobutane for domestic refrigerators and freezers. For the EU, as of 1, January 2015 HFC-134a is banned from use in domestic refrigerator/ freezer production.
- Similarly Japan has been using isobutane as the dominant refrigerant for domestic refrigerator/ freezers for more than the last 10 years.



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SUPPLY

SCALABILITY AND LOCALIZATION

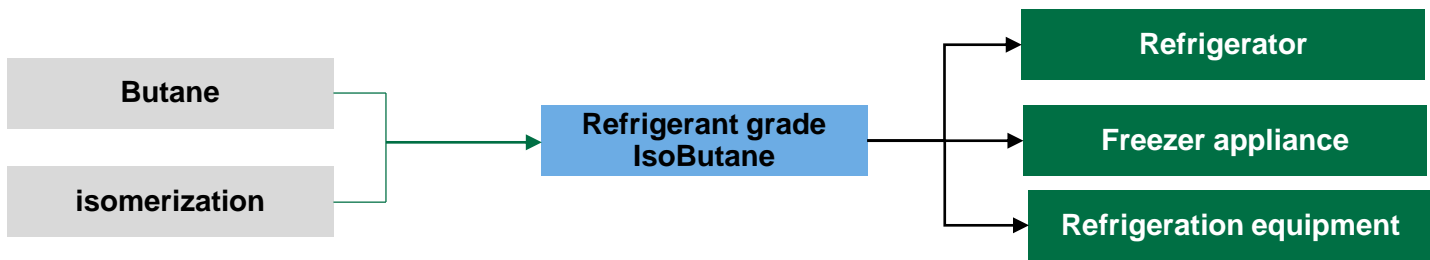
Grade: Low Medium High

- Easy local access to key raw materials in KSA - Butane is produced in Al-Jubail.
- KSA's strategic advantage over regional peers in cost of establishing business especially in manufacturing domain
- Potential to serve local and regional market and create a 'regional hub' for chemicals manufacturing in KSA

IMPORT DEPENDENCY

- No local production of Refrigerant grade IsoButane in Saudi Arabia, 100% of the local demand in KSA is met by imports

VALUE CHAIN ANALYSIS



Key raw materials
 Investment scope
 End use applications

KEY STAKEHOLDERS



ENABLING FACTORS

ENABLERS

- Up to 75% of project financing by Saudi Industrial Development Fund (SIDF)
- 2-year grace period for the repayment of loans
- Expat worker levy waived-off for industrial manufacturers until October 2024
- HRDF covers 30-50% of Saudi employees monthly salaries (additional 10% for females) for 2 years, provided that it does not exceed USD 4,000

COST OF DOING BUSINESS IN KSA

Factor	Ranking Amongst Regional Peers
Electricity tariffs for industrial players	\$48 /MWh
Productivity adjusted wages	\$3.3 /hour
Logistics Performance Index (1 – 5)	3.2
Customs Clearance Index (1 – 5)	2.7
Ease of getting credit (0 – 100)	50

Bottom 25%
Top 75%
Top 50%
Top 25%

DEFINITIONS

#	SCORECARD SECTION	DEFINITIONS
1	Market size	Size of market in value/volume in KSA and/or Region (MENA/GCC) covering future projections based on available estimates from published /government sources
2	Demand drivers	A select number of factors that will influence future demand for the related product/service
3	Investment highlights	An overview of key financial metrics summarizing the investment opportunity along with the expected return based on the suggested investment size
4	Value proposition	Summary of key differentiators that position KSA as a strategic choice over other regional/global peers
5	Market readiness	An overview of KSA market structure, market maturity and level of participation by local and global players
6	Competitor analysis	List of the local & international players manufacturing the underlying product in Saudi Arabia and their market share
7	Global trends	Latest business developments within the sector/product category
8	Scalability and localization	Ease of scaling the business across the value chain or into new adjacent products or geographies that would maximize the opportunity's investment returns and the ability and potential to locally manufacture the product and its components
9	Import dependency	An overview of the countries from which Saudi Arabia is importing the product and their value/volume and share in total imports
10	Value chain analysis	The process or activities that would potentially need to be carried out to deliver the underlying product or service
11	Key stakeholders	Government institutions, organizations, and/or authorities that participate or influence the market for the underlying product/service
12	Enablers	Factors that enable investment in the underlying opportunity
13	Cost of doing business in KSA	Key factors that position KSA as a competitive destination for investment in the region

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