

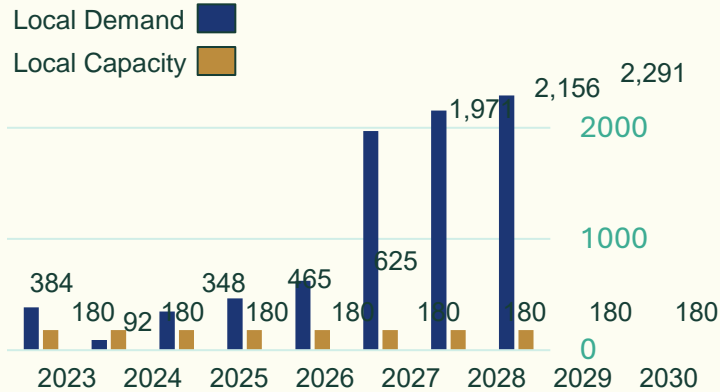
Heat Exchangers

Opportunity Description: To set up a Heat Exchangers manufacturing facility to serve the local and regional demand

Heat Exchangers – Opportunity Card (1/2)

Opportunity Description: To set up a Heat Exchangers manufacturing facility to serve the local and regional demand

KSA Market Size in Units₁



Investment Highlights₂

- Expected Investment: **~\$387 Mn**
- Expected Plant Capacity: **~275 Units**
- Expected Jobs Created: **~590 including ~177 Saudis**
- Expected Project IRR: **~10%**
- Expected Equity IRR: **~11%**
- Payback Period: **~15 years**
- Expected GDP Impact till 2030: **~\$374 Mn**
- Location: **Jubail, Dammam or Yanbu**

Major Assumption

Heat Exchangers Average Price	~\$666,667 / Unit
Debt	70%
Interest rate	7%

Raw Materials

- Carbon Steel
- Stainless Steel
- Copper
- Aluminum
- Titanium
- Nickel Alloys

Energy Sector Demand Drivers

- Saudi Aramco expanding its crude oil production capacity to 13 million barrels per day (MMB/D) by 2027
- KSA aiming to increase the Petrochemical production from 38 to 70 M tons annually
- The Jafurah onshore gas field is considered one of the largest unconventional gas fields worldwide and is driving the demand for Heat Exchangers in KSA
- KSA targets increasing their Natural Gas production by 40%

Other Sectors Demand Drivers

- Demand for heat exchangers in the local and regional market is driven by development of Construction, Automotive, Food & Beverage, and Aerospace industries

Value Proposition

- KSA is the world largest exporter of Crude Oil and 2nd largest producer
- KSA is well positioned to play a leading role and become a major clean Hydrogen exporter which will drive the demand on natural gas
- KSA has the 6th largest natural gas reserve of 329 Tn Cubic ft
- The recent discovery of 8 gas fields, 3 of which are unconventional

Heat Exchangers – Opportunity Card (2/2)

Import Dependency

- In **2021**, Saudi Arabia imported **\$96.5M** in Heat exchange units, non-domestic, non-electric, becoming the **34th** largest importer of Heat exchange units, non-domestic, non-electric in the world₁
- Saudi Arabia imports Heat exchange units, non-domestic, non-electric primarily from: **South Korea (\$17.5M)**, **China (\$17.1M)**, **Italy (\$14.7M)**, **Germany (\$9.18M)**, and **United Arab Emirates (\$7.15M)**₁

Localization Potential

Baseline	Target	Contribution*
47%	75%	14%

Scalability

- The business can expand its geographic reach by targeting new markets in the middle east region
- The business can expand its product line to offer a wider range of heat exchangers of varying sizes

Enablers and Incentives

No enablers are taken into consideration in the financial estimation for this opportunity, but the opportunity is subject to off the shelf's incentives like:

- **SIDF financing up to 75% of CAPEX**
- **HRDF covers monthly salaries of up to 3,000 SAR / employee for Saudi employees**
- **Tax credits for R&D for manufacturers**
- **Custom duty exemption for import of capital goods/machinery** required for setup of facility

Major Local and International Manufacturers

- Local Manufacturers: Zamil Steel
- International Manufacturers: Alfa Laval, Xylem, Hisaka Works

Key Stakeholders



Value Chain

