

## Calcium Ammonium Nitrate (CAN) INVESTMENT OPPORTUNITY SCORECARD MINING & METALS

NOVEMBER 2020



## MINING & METALS Calcium Ammonium Nitrate (CAN)

**OPPORTUNITY'S DESCRIPTION:** Setupa 500 ktpa capacity manufacturing plant for Calcium Ammonium Nitrate (CAN)

- DEMAND -

#### MARKET SIZE, USD MN 4.679 ~10.4% 2,853 4,646 1,741 872 1,062 2,827 1,721 1.047 858 2018 2020 2025 2030 2035 Rest GCC CAGR 10.4% KSA CAGR 5.2%

#### INVESTMENT HIGHLIGHTS

- Expected investment size of USD 350 Mn
- Plant capacity: 500 ktpa
- Expected IRR: 8%
- Payback period: 9.24 years

#### **NVESTMENT OVERVIEW**

#### VALUE PROPOSITION

 Mining Industry set to become the "third pillar" of the Saudi industrial base due to KSA's rich deposits of minerals

**Moderate Potential** 

- KSA's geographical advantage and trade agreements with neighboring countries make exporting favorable
- KSA is working to develop sustainable and globally competitive value-added semi-finished and finished metal industries (downstream) that support the Kingdom's goals of diversification
- Development of fertilizer opportunities driven by cost advantage in feedstock, mainly in natural gas which accounts for up to 75%-90% of ammonia production cost

### **MARKET OVERVIEW**

#### **GLOBAL TRENDS**

- Expected growth of demand for global nitrogenous fertilizers at about 3% p.a. for the next ten years
- Asia is the largest consumer market for fertilizers, with approximately 60% of the total demand
- Nitrogen type fertilizers expected to grow at 2-3% pa until 2035, higher than phosphate and potassium fertilizers, with higher growth expected from developing regions of Africa, Asia and South America.
- Global Calcium Ammonium Nitrate (CAN) is expected to grow at a CAGR of 5-6% from 2018-2035. Latin America, Oceania
  and Africa are net importers for Calcium Ammonium Nitrate (CAN)



**KEY DEMAND DRIVERS** 

INVEST 축

SAUDI 🤸

- Higher future demand for CAN in KSA due to growth of the local agricultural sector
- The lower environmental impact of CAN makes it a potential product with greater acceptance due to the new environmental regulations
- Along with KSA, rest of West Asia and Africa will have a demand supply gap of more than 6,900 ktpas by end of 2030



# MINING & METALS Calcium Ammonium Nitrate (CAN)

#### SCALABILITY AND LOCALIZATION



- Natural Gas a key raw material that accounts for 75-90% of ammonia production cost is available in Ras AlKahir (RIC) at a competitive price
- The existence of players such as MA'ADEN or SAUDI LIME will guarantee the supply of necessary raw materials in RIC and Jubail

#### **IMPORT DEPENDENCY**

Current demand is fully met by imports

#### ENABLING

#### FACTORS

#### ENABLERS

**Bottom** 

25%

Top

75%

Тор

50%

Тор

25%

- Up to 75% of project financing by Saudi Industrial Development Fund (SIDF)
- Human Resources Development Fund (HRDF) covers 30-50% of Saudi employees monthly salaries (additional 10% for females) for 2 years
- SABIC offers incentives within its NUSANED program for the Agri-Nutrients industry (in Base Chemicals and Specialties)

#### VALUE CHAIN ANALYSIS COST OF DOING BUSINESS IN KSA Process **Ranking Amongst Regional Peers** Factor **Raw Materials** Oswald process Evaporation Neturalisation Granulation Electricity tariffs for \$48 Ammonia is oxidized to 2 key elements are The exothermic Process aimed to Process where the grounded industrial players /MWh necessarv for the form nitric oxide and neutralisation of remove the majority lime is introduced. also nitrogen dioxide agglomerating the obtained production of CAN, both produced nitric acid of water existing in are available in KSA: with ammonia gas ammonium nitrate ammonium nitrate with this Productivity adjusted The nitrogen dioxide \$3.3 produces ammonium solution substance to obtain CAN that is formed is Ammonia wages /hour nitrate and steam absorbed in water Water content of In some cases, this phase can Calcium around 8% is needed be substituted by 'prilling'. Logistics Carbonate which refers to the formation for the granulation Performance Index 3.2 process of granules by the (1 - 5)solidification of droplets of fertilizers Construction Costs (Indexed to US, % 0 74 is cheapest) **KEY STAKEHOLDERS** 10 الصندوق هيئة المحتوى المحلي مالمشتريات الحكومية \* Ease of getting credit الصناعم وزارة الاستثمار مدن Local Content & Government Procurement Authority 50 وزارة الصناعة والثروة المعدنية appendia clipità o i ill'à opin (0 - 100)Ministry of Investment Ainistry of Industry and Minoral Re-







# 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



## CONNECT WITH US FOR MORE DETAILS: <u>Metals@misa.gov.sa</u>



