



**Investment Opportunity
White Paper
On**

Establishing a Manufacturing Facility for
Transformers
in the Kingdom of Saudi Arabia

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Background

A transformer is an electromagnetic device that changes voltage of Alternating Current (AC), e.g., raises and lowers in direct proportion to currents and in inverse proportion to the ratio of the number of turns of primary and secondary windings. The input side of transformer is the high-voltage primary side. The output low-voltage side is called the transformer secondary. Input voltages for Saudi Aramco Installations ranges from 230KV to 480V, and the output voltages ranges from 34.5KV to 208/120V. The types of transformers used within Saudi Aramco are Oil-fill power transformers, Pad-mounted transformers, and Dry-type transformers.

The construction of a power transformer deals with Core, Coil, Insulation system and Enclosure as main components. The material used to make the transformer core is mainly Silicon Steel Alloy, whereas coil is usually made of Copper or Aluminum.

The following Saudi Aramco Material specifications govern the requirements concerning power transformers:

- 14-SAMSS-531 for Oil-Fill power transformers
- 14-SAMSS-533 for three-phase dry-type power transformer
- 14-SAMSS-534 for overhead-type distribution transformer
- 14-SAMSS-536 for pad-mounted three-phase distribution transformer

Manufacturing Processes

The manufacturing process of the core material is closely controlled to yield an alloy of approximately 3% silicon and 97% steel. The material is cold rolled and annealed to orient the grains to obtain a high permeability and low hysteresis in the direction of rolling. The coil materials mainly used are copper and aluminum, with copper being the more preferred at Saudi Aramco.

Raw Material Availability

Steel products, oil and some copper wires are available and can be procured locally. Major raw materials need to be imported to the Kingdom from various sources. Existing local manufacturers imports most of their raw material from Europe, US, Korea, India, and Japan.

It is worth mentioning that all raw material and manufacturing equipments that are not produced locally could be imported with full exemption from custom duties.

Present Situation

Currently, there are three major local manufacturers' that produce various types of transformers with limited rating up to 5000KVA where almost all of their production consumed in the local market. Two of the local manufacturers produce Transformers in accordance to European standard (IEC) whereas the other follows the American standard (ANSI). It is preferred for any new investment to focus on the large size power transformers as the entire region has only one manufacturer capable of producing larger ratings and higher voltages.

Referring to Ministry of Economy and Planning data base, Saudi Arabia imported various types of transformers with a total cost of \$607 MM over the last four years. In 2006 only, KSA imported transformers with a cost of \$166,649,431 to satisfy the Saudi Electrical Company expansion projects as it is the main client for transformers in the Kingdom.

The tables below summarize Saudi Aramco consumption of small rating power and distribution transformers over the last five years. Large transformers rating are normally procured as part of the LSTK projects.

Distribution Transformer, Pad Mounted (SAMSS-536):

Material Description	Total-Order Quantity	Total-PO Value \$
Transformer, Distribution, Pad Mount	192	2,542,341
Transformer, Distribution: 1000KVA.	4	75,066
Transformer, Distribution: 750KVA	2	25,508
Transformer, Distribution: 500KVA	20	272,159
Transformer, Distribution: 225KVA	27	29,2631
Transformer, Distribution: 150KVA	2	19,533

Power Transformer, Oil Filled (SAMSS-531):

Material Description	Total-Order Quantity	Total-PO Value \$
Transformer, Power, Oil-Filled	72	17,749,562
Transformer, Power; 60 30 DEG C; OA/FA	3	2,193,466

Power Transformer, Dry Type (SAMSS-533):

Material Description	Total-Order Quantity	Total-PO Value \$
Transformer, Power, Dry 500 KVA	21	40,029
Transformer, Power, Dry above 501KVA	6	15,200

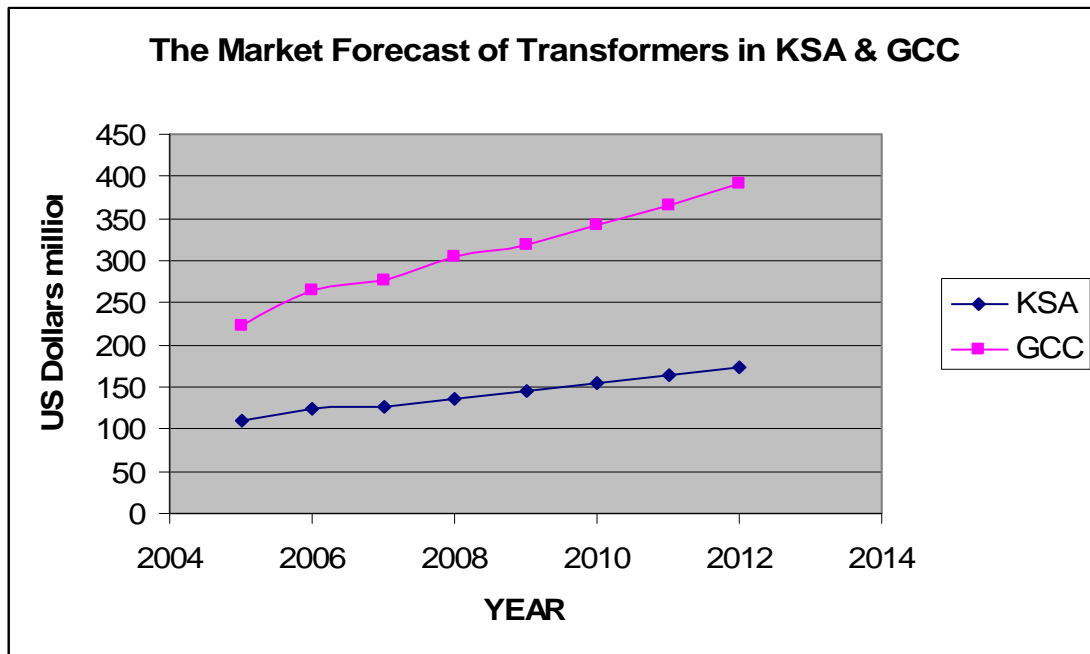
Others (Off shelf dry type):

Material Description	Total-Order Quantity	Total-PO Value \$
Transformer, Distribution: 75KVA	40	110,238
Transformer, Distribution: 50KVA	13	20,855
Transformer, Distribution: 45KVA	77	209,305
Transformer, Distribution: 37.5KVA	49	74,990
Transformer, Distribution: 30KVA	10	29,790
Transformer, Distribution: 25KVA	35	38,000
Transformer, Distribution; 60; 30 DEG	1,078	3,046,293

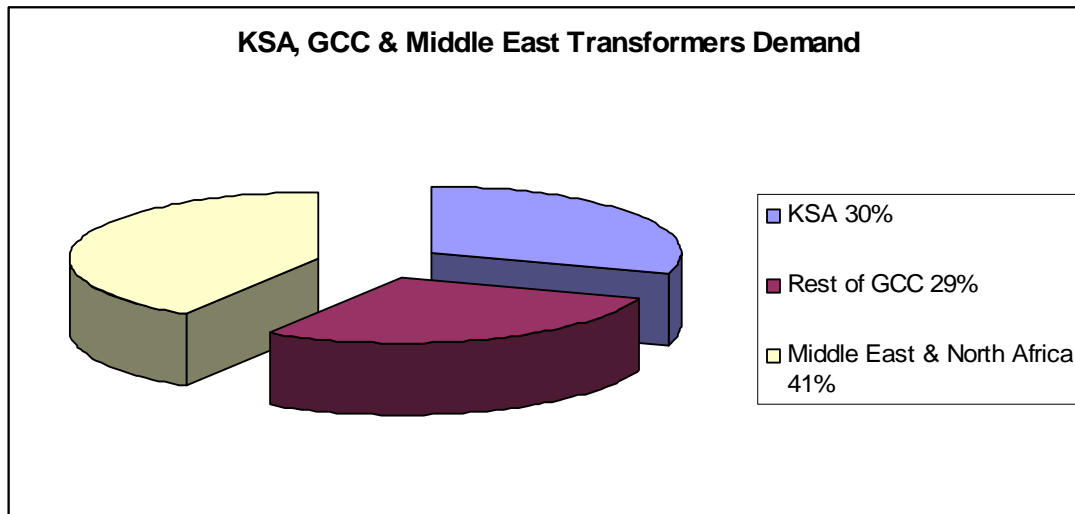
Total Saudi Aramco demand was about \$23 MM over 2003-07, which can be broken down to an annual average demand of \$6 MM. This demand doesn't include procurement by LSTK Contractors on Saudi Aramco projects as well as our joint ventures in the Kingdom, which is typically 85% of the total demand.

Regional Demand and Market Potential

The sales of the transformers in the Saudi market as well as GCC market has grown and continue to grow in a steady rate. The Saudi and GCC forecast is portrayed in the graphic below, and compared with the Middle East forecast on the subsequent Pie chart.



The pie chart below shows Saudi Arabia's and the rest of GCC share of the Middle East market.



Way Forward and Conclusion

Provided the above analysis, there may be a feasible investment opportunity to set up additional manufacturing facility for transformers in the Kingdom. Existing manufacturers are overloaded and not able to satisfy local as well as regional demand. Interested investors suppose to do due-diligence and conduct feasibility study to verify the viability of this venture. Furthermore, investors need to broaden their horizon and consider GCC market as only one piece of the pie. We propose to solicit interest from local agents of international companies that are potential technology partners to enable them to conduct a feasibility study for the proposed venture.

APPENDICES

Many incentives are available to the investors who wish to pursue manufacturing in the Kingdom of Saudi Arabia including the general preference by Major Saudi companies to procure from local manufacturers. Except as otherwise noted and subject to limitations and/or exclusions published by the Saudi Government, the following incentives are provided to foreign and local investors.

Appendix 1: Incentives for Foreign Investors

- Can own 100 percent of their investment projects in The Kingdom of Saudi Arabia (KSA), as applicable.
- Shall enjoy all the benefits, incentives and guarantees extended to national (100% Saudi owned) investments.
- Under the current Saudi Arabian Income Tax Law, shall pay a maximum of 20 percent tax on corporate profits above SR 100,000 (US\$26,700).
- Subject to the provisions of the Saudi Arabian Income Tax Law and Companies Regulations, are allowed to repatriate 95% of their capital, profits and dividends (5% is deducted as a withholding tax and there are no currency conversion or currency export restrictions).
- May freely transfer shares.
- Can enjoy (i) incentives provided under the Protection and Promotion of National Industries Act, including exemption from customs duties on imports of machinery and equipment, raw materials and spare-parts if imported for industrial use, and (ii) preferential treatment for national products in governmental procurement.
- Can apply for industrial loans on favorable terms from the Saudi Industrial Development Fund (SIDF) or other lending agencies.
- Will benefit from the Kingdom's WTO accession commitments and applicable bilateral investment protection and promotion agreements signed by the government.
- Subject to Saudization requirements, can sponsor foreign employees (i.e. to obtain entry and exit visas and residency and work permits) pertaining to the investment project.
- Can refer disputes to the Board of Grievances and Investment Disputes Settlement Committee.
- Can carry over current tax losses into future years to offset taxes on future profits.
- Can benefit from non imposition on personal income tax.
- Shall receive the same treatment, protection and incentives accorded to a national investment since the Kingdom is member of the Multilateral Investment Guarantee Agency (MIGA).
- Shall be provided pre-investment assistance by Saudi Arabian General Investment Authority (SAGIA) such as in:
 - Conducting feasibility studies for industrial projects
 - Providing information and statistics for investment projects within the scope of Saudi Arabia's development plans

Appendix 2: Investment Enablers

- Availability of low cost energy:
 - Gas is currently priced at US \$0.75/mmbtu and is subject to allocation by the Ministry of Petroleum and Mineral Resources
- Availability of low cost feedstock:
 - Natural Gas & Ethane are currently priced significantly lower than international prices at US \$0.75/mmbtu and is subject to allocation by the Ministry of Petroleum and Mineral Resources
- Availability of developed industrial sites on long term rental at nominal charges:
 - Royal Commission's land in Jubail & Yanbu cost SR1/m²/year (about US \$0.27/m²/year)
 - Industrial cities' land in Riyadh 1st & 2nd , Jeddah 1st & 2nd , Dammam 1st & 2nd cost SR 0.08 (US \$0.02) /m²/year plus one time payment of SR 20 (US \$5.3)/m²
- Provision of basic utilities at government set rate of:
 - 12 halalah/kwh (US 3.2 Cent/kWh) for electricity
 - 0.10 - 6 SR/m³ (US \$ 0.027-1.6 /m³) for water based on usage category
- The SIDF is ready to provide interest-free loans up to 50% of project capital or up to SR 600 million (US \$160 Million) whichever is lower, at a predetermined management fee, on projects supported by sound feasibility study.
- Availability of duty free zone at Jubail and Dammam Seaports.
- Availability of financial support from Human Resources Development Fund (HRDF) for indigenous manpower employment for vocationally qualified and non-qualified for a maximum of SR 1,500 (US \$ 400) per month during training, and up to SR 2,000 (US \$ 533) per month upon employment for a period varies up to 2 years.
- Promotion of non-oil product and service exports of by the Saudi Export Development Center (established under the umbrella of the Saudi Council of Chambers of Commerce and Industry).

Appendix 3: Other kingdom Advantages

- Strategic geographic location with convenient access to fast growing regional and international markets.
- Abundance of natural resources.
- Long history of political and economic stability.
- Commitment to open market economic policies.
- No history of labor disputes or work strikes.
- Leading exporter/importer in the Middle East.
- Largest consumer market in the Middle East.
- Modern and well equipped industrial cities.
- On going privatization process of public entities.
- High market liquidity, and stable, strong and advanced banking system.
- Availability of insurance service providers covering a variety of insurance risks (e.g. property" fire, theft", motor vehicles, contractors, 3rd party, health, etc.).
- World Bank ranked the Kingdom number 23rd from 38th out of 178 countries. The report ranks Saudi Arabia as the best place to do business in the entire Middle East and Arab World, ahead of Kuwait (40th)
- The Kingdom, as per SAGIA, ranks within:
 - The first 7 countries of lowest inflation rates in the world (IMD)
 - The first 25 countries in total cash savings (index of Economic Freedom)
 - The first 24 countries of least cost public sector loans (from "SIDF")
 - The best 3 countries in the world as of proprietorship registration cost
 - The first five countries in the world having easiest labor recruitment and work hours flexibility
 - The first 8 countries in best exchange rate policies (IMD)
 - The first 7 countries in total local savings (IMD)
 - The best country in the Middle East in exchange rate index (Doing Business '06)
 - The highest purchasing power in the Middle East
- As per SAGIA, the Kingdom enjoys the following advantages:
 - The biggest financial market in the Middle East
 - The largest foreign investment balance in the Arab world (Arab Investment Guarantee Corporation Reports)
 - The largest economy in the Middle East with gross local product exceeding 300 billion dollars, and a growth rate reaching 6% per annum over the last 3 years
 - The largest proven conventional oil reserves in the world and is the fourth largest natural gas reserves

Appendix 4: Important and Useful Links

- Saudi Arabia General Investment Authority, www.sagia.gov.sa
- Human Resources Development Fund, www.hrdf.gov.sa
- Royal Commission for Jubail and Yanbu , www.rcjy.gov.sa
- Saudi Organization for Industrial Estates and Technology Zones, <http://www.soietz.gov.sa/HomePage.aspx?Lang=en>
- Rabigh Conversion Industrial Park, www.rabighCIP.com
- Saudi Trade & Export Development Company, www.tusdeer.com
- Dammam Bonded & Re-export Zone, www.reexport.com
- Saudi Ports Authority, www.ports.gov.sa
- Saudi Industrial Development Fund, www.sidf.gov.sa
- Public Investment Fund, http://www.mof.gov.sa/en/docs/ests/sub_invbox.htm
- Council of Saudi Chambers, www.saudichambers.org.sa
- Saudi Customs, www.customs.gov.sa
- Department of Zakat and Income Tax, www.zakat.gov.sa
- Ministry of Commerce and Industry, www.commerce.gov.sa
- Ministry of Labor, www.mol.gov.sa
- General Organization for Social Insurance, www.gosi.gov.sa
- Saudi Arabian Standards Organization, www.saso.org.sa
- Water Utility Company for Jubail and Yanbu', www.marafiq.com.sa
- Ministry of Petroleum & Mineral Resources, www.mopm.gov.sa
- Ministry of Finance, www.mof.gov.sa
- Electricity and Cogeneration Regulatory Authority, www.ecra.gov.sa
- Saudi Basic Industries Corporation, www.sabic.com
- Saudi Arabian Oil Company (Saudi Aramco), www.saudiaramco.com
- Saudi Electric Company, www.se.com.sa
- General Organization for Technical Education and Vocational Training, www.gotevot.edu.sa
- Saline Water Conversion Corporation, www.swcc.gov.sa

Appendix 5: Contact Details

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