



# IG PETROCHEMICALS LIMITED

**To:** Mr. Umurzaqov Sardor Uktamovich  
Ministry of Investment and Foreign Trade of Uzbekistan

**From:** Mr. Nikunj Dhanuka  
CEO, IG Petrochemicals Ltd., India

**Date:** 23 April, 2019

**Subject:** IGPL Interest in developing Ammonia Project and Maleic Anhydride Project in Uzbekistan

**Dear Mr. Sardor Uktamovich :**

IG Petrochemicals Ltd. India (IGPL) is a public limited company of India, listed on the Bombay Stock Exchange (BSE), India. We currently produce 160,000 metric tonnes per year of Phthalic Anhydride (PA) at our three plants located in Navi Mumbai, India. With the expected start-up of our fourth PA plant, we will be producing 220,000 metric tonnes per year PA, by end of 2019. We have been in operation since 1992, and are the largest manufacturer of PA in India. We also make Maleic Anhydride and Benzoic Acid as co-products at our existing plants.

We have identified unique petrochemicals manufacturing opportunities for developing Joint-Venture (JV) projects in an appropriate industrial location within Uzbekistan. Ammonia and Maleic Anhydride our chemicals of interest; they both are building block chemicals with a good market potential in a developing nation such as Uzbekistan.

Ammonia is used as a raw material to make Urea and other agricultural fertilizers, and MA as a high-grade product is used as a raw material in subsequent production of polyester resins and plastics, agricultural chemicals, petrochemical product (lube oil) additives, wetting agents, textile chemicals and automotive and construction (particularly infrastructure) industries.

Thus, both of these chemicals have broad-based downstream applications within Uzbekistan chemicals industry and for the Export markets out of Uzbekistan. IG Petrochemicals has a good product marketing knowhow in developing the required assets for both, Ammonia Plant and MA Plant.



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### Ammonia Plant:

IGPL proposes to develop Ammonia manufacturing capacity of 87,000 Metric Tonnes per Annum (87 MKTA), as the first train; this is expandable to additional trains in the later period, depending on the local market for ammonia.

Natural gas is the primary raw material required for the production of Ammonia. Approximately 7,500 million BTU/day of natural gas could be required as raw material and fuel gas for the manufacturing of 87 MKTA of Ammonia. If electric power is unavailable or more expensive, we can make this Plant operate self-sufficiently in its energy requirements during normal operation thru the use of co-generation technology. Heat of reaction of the process would be converted to high-pressure steam and electricity for use during normal operation of the plant. By-product gases will also become available as value opportunities for local markets.

### Maleic Anhydride (MA):

IGPL envisions a MA production facility for 45,000 MTPA. Normal Butane (n-butane) is the main raw material for production of MA.

Approximately 50,000 MTPA of n-butane is needed for this capacity MA Plant. This Plant would be best located adjacent to the source of n-butane gas, which is normally available from an existing Refinery.

The MA produced can be briquetted and bagged in 25 Kg - 500 Kg bags for dispatch for local as well as export markets.

Power, Municipal water, De-Mineralized water, nitrogen, fuel gas are the various utilities required for this MA Plant.

Please let me know if we can explore these opportunities further amongst us with the aim of developing a long-term valuable future partnership between us.

Sincerely,

**Mr. Nikunj Dhanuka, CEO**  
IG Petrochemicals Ltd.



CC:

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