Project Proposal: Regression Analysis on Gas Prices

**Executive Summary:**

With the advent of the 21st century, energy has been playing an important role to assess the progress of any developing nation in the world. India has been one of the lead importer of Crude oil from the world and so is China. Thus, in order to track the development of such nations, the cost that the citizens of these nations pay for the use of this energy can give a brief insight on many of the performance metrics and policy scenarios in the country. With this thought in mind, the project will study the effects of various social, economic and political factors on the prices of petroleum (measured in INR/litre) available to end users in India.

It is highly likely, that the world energy policies, trade relations with other nations and the internal political and economic issues in a developing nations like India have a substantial effect on the energy prices that are actually available to the citizen. Thus, the project will also assess whether there is a significant effect of Crude oil production in the world, exchange rate for USD/INR, crude oil futures prices in the financial derivative (commodity) markets and finally the inflation rate on the end price of refined petrol (gas) available to the Indian citizens.

**Main Factor: As discussed earlier, petroleum price in INR/litre would be the main variable of interest.**

**Regressors:**

* **Crude oil production in the world indicates how scarce or abundant the oil wells in the world are. Oil is imported by India from the owners of the oil wells in USD/barrel. Thus, prices at which it is available to India or the price that is prevalent in the commodity futures markets for Crude oil (an indicator of the bid-ask price for world oil) will give an idea of India’s market share of imports in Crude oil.**
* **Exchange rate plays an important factor as customers pay in INR for petrol but crude oil is available in USD. Thus, valuation of the currency may affect the prices.**
* **Finally, the inflation rate which is an indicator for Consumer Price Index (CPI) gives a brief idea of how much portion from his overall price basket, a customer is willing to pay for the gas.**

**Source of data: Majorly, the data was collected from the following sites:**

<https://www.iea.org/countries/non-membercountries/india/>

<http://in.investing.com/commodities/crude-oil-historical-data>