

Corporate Sustainability ,CO2 emission in Middle East Countries

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Abstract

Effort has been made for an overview of CO₂ emission over the world, considering the per capita CO₂ emission. Data analysis were made using IEA web site and more reports of Energy Balance of Iran. Consideration were made for CO₂ emission in Middle East countries especially Iran. The situation of Iran between Middle East Country, from the point of CO₂ release has been distinguished as the 4th. .Therefore, Consideration has been made for United Arab Emirate, Iraq and Saudi Arabia respectively. The emitter countries consideration over the world has been made for U.S.A as the first and China as the second. While Iran is one of the last for the least rate of CO₂ emission release into the atmosphere. Other consideration has been made for per capita CO₂ emission over the world. Which has distinguished U.S.A, Australia, Canada, Saudi Arabia, Russia and others respectively. Although Iran per capita CO₂ emission is low but it seems greater than Mexico, Turkey, China and India .Which could indicate Iran as a big consumer of energy .Therefore the data analysis of GHG in Iran is mostly due to fossil fuels .The consideration for CO₂ equivalent reduction during 2001-2005 could considerably being covered for SO₂, SO₃, CH and SPM especially in 2004. Which is of great interest from the point of cost of energy generation.

Keywords: CO₂ emission, per capita CO₂, Middle East Countries.

1- Method of Analysis:

Effort has been made for data processing with the use of IEA web site and Energy Balance of Iran reports to achieve the necessary information which could let to discuss the situation of energy and CO₂ emission by sectors, regarding CO₂ emission per capita .Besides the main route of greenhouse effects considering the energy sectors in Iran.

2- Results:

China has been distinguished as a greatest CO₂ emission over the world after U.S.A., Fig.1. Where the per capita CO₂ emission in China is low, regarding the high population growth in this country. Although Iran is one of the least emitter over the world, but it provides per capita CO₂ emission of 4400-5600 MMT (2000-2003), Fig.5, concluding as a developing country. The natural gas development in Iran caused the high amount of CO₂ emission by means of 216.1gr/kwh, Fig.4. Where the contribution of N.G in China is provided by means of 1.31%, Fig.3. This could be concluded for China as great fossil fuel consumption, where Iran is concluded as a great Gas consumer in a challenge of energy resource.

3- Discussion:

The CO₂ emission contribution over the world has been regarded in this study as contribution percentage via IEA web site. Which is by means of U.S.A as the first, China as the second and

European Union as the third, but Iran CO2 contribution is greater than the Indonesia, France and Brazil. Which corresponds Iran a high per capita energy consumer as a developing country, Fig.1.

Other consideration were made by means of per capita CO2 emission over the world corresponding to Australia, Canada, Saudi-Arabia, and Russia respectively. Where per capita CO2 in Iran is greater than Mexico, China, Brazil and Indonesia, respectively, Fig.2. The CO2 emission by sectors in China is provided to the contribution of coal by means of 58.8%, oil 3% and N.G by means of 3.4% and Hydroelectric by means of 36.5%, Fig.3. Where contribution of CO2 emission through power plants in Iran is distinguished as 170.1gr/kwh due to thermal P.P., 216.2 g/ kwh , Gas P.P., 127.2 , conventional P.P., 237 g/kwh, Diesel P.P., 1.8g/kwh due and hydroelectric P.P., Fig.4. Where the other air pollutants are negligible. Other consideration were made for per capita CO2 emission in Iran as 4400-5600MMT during 1995-2003, Fig.5.

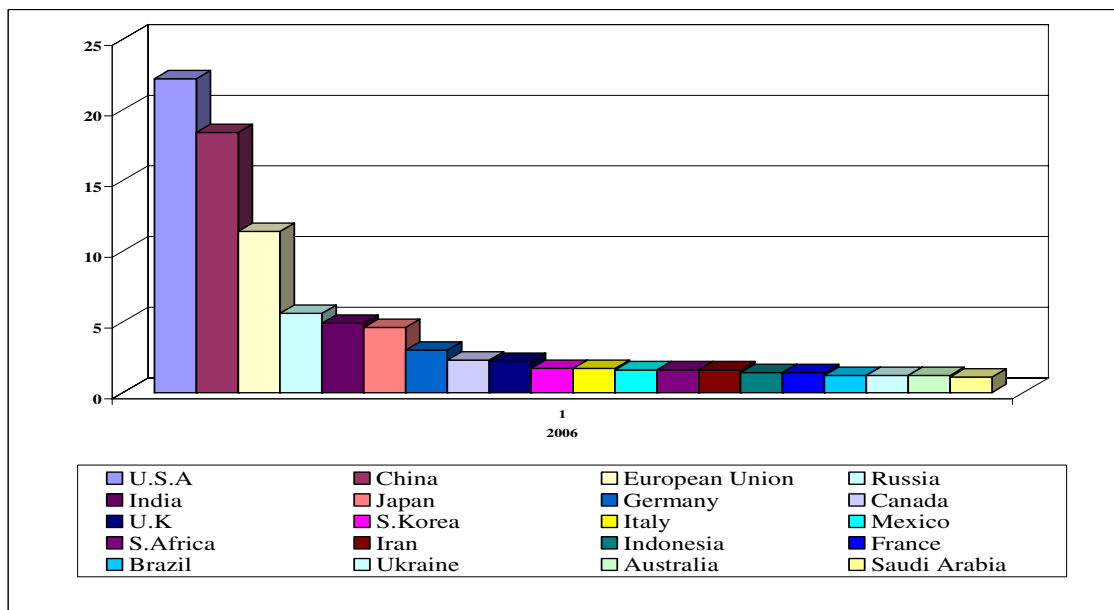


Fig.1: List of Countries and CO2 Emission Contribution Percentage.

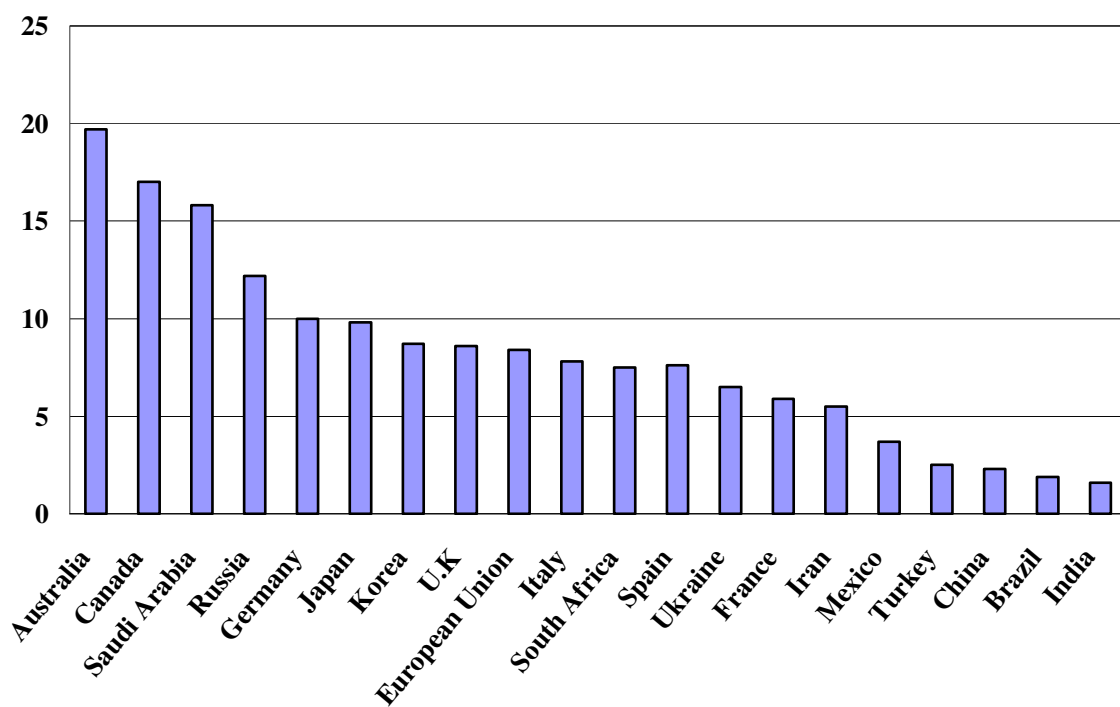


Fig.2: Per Capita Co2 Emission Over The World (2000)

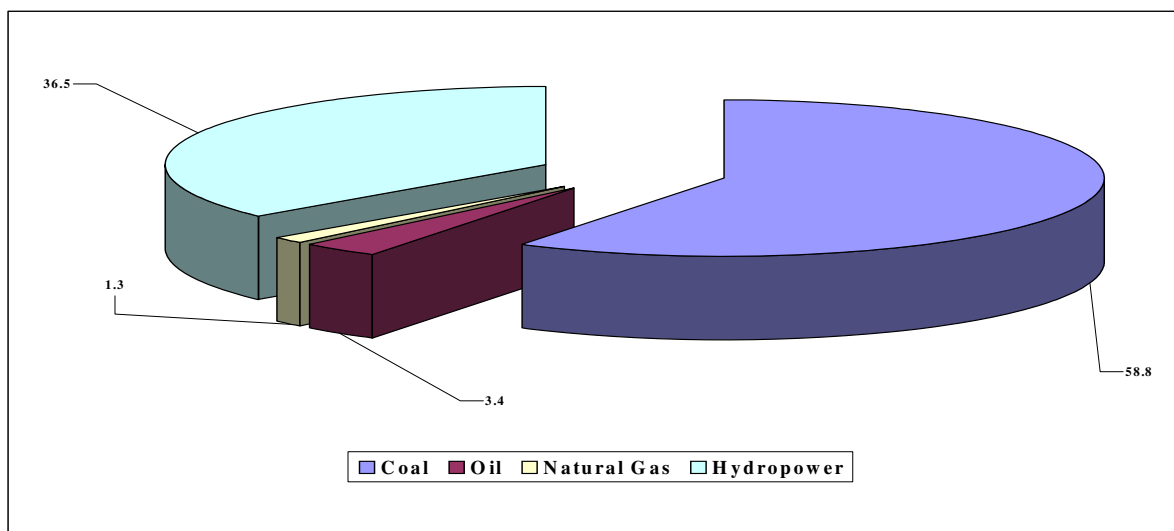


Fig.3:Energy Resource and CO2 Emission in China(2000)

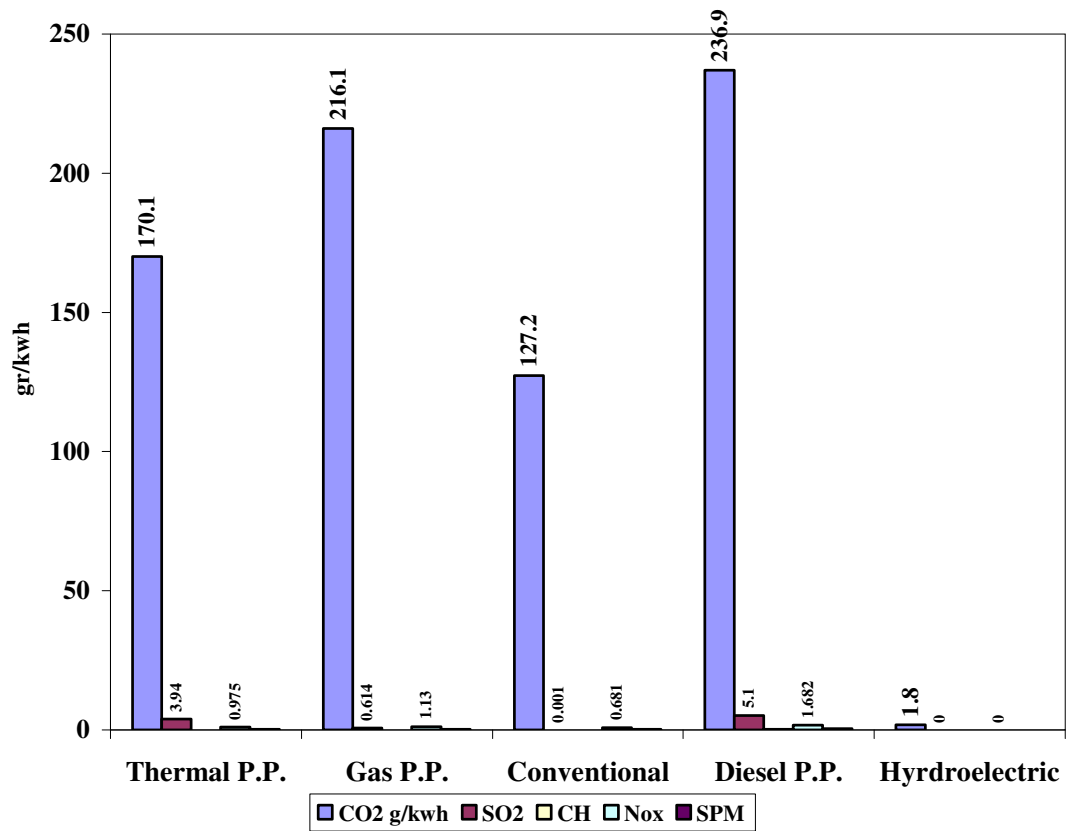


Fig.4: Air pollutants due to Power Plants in Iran

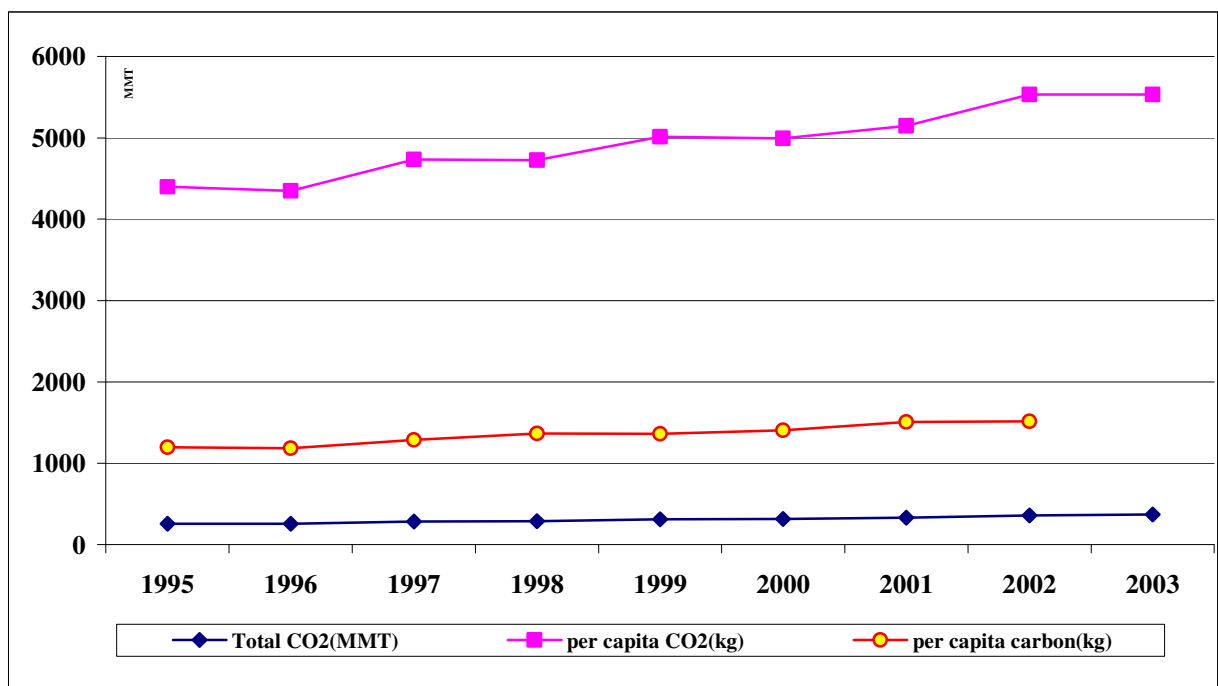


Fig.5: Total and per Capita CO2 Emission in Iran.

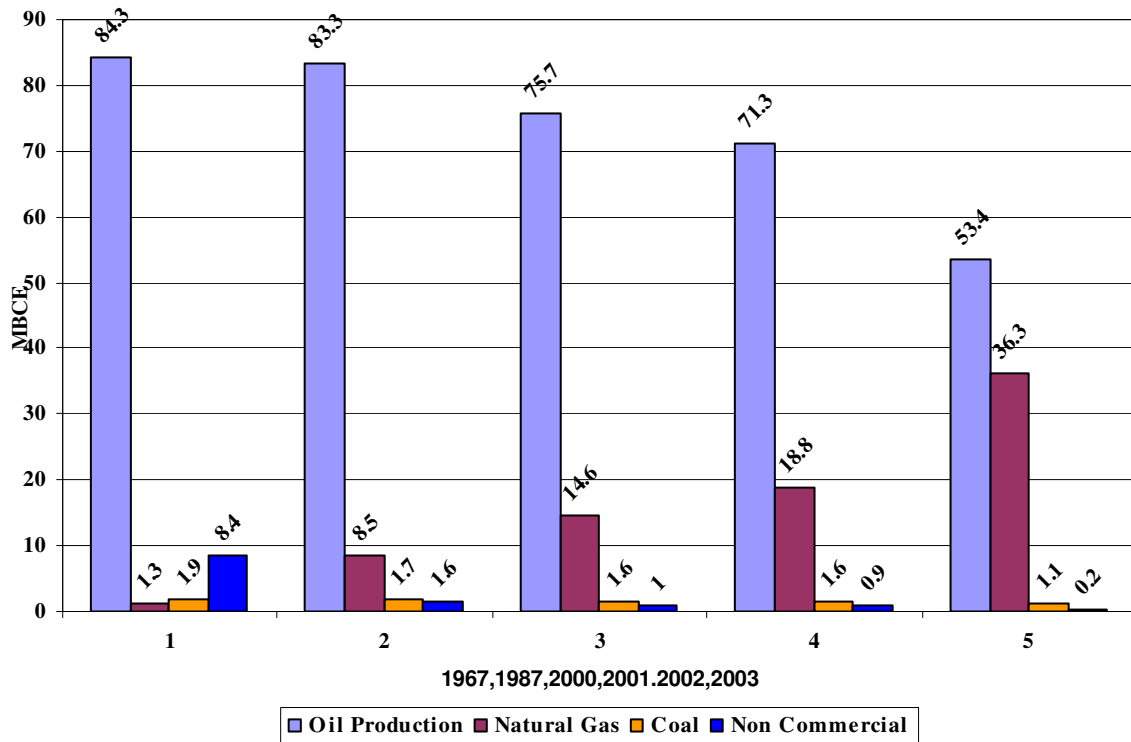


Fig. 6:1 Energy Resource Consumption Percentage in Iran.

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