



The Optimization and Modeling of A Comprehensive Energy Efficiency Plan for the Glass Industry in Iran With Regard to International Policies

1.H.Ravaghi, 2.S.M.Sadeghzadeh, 3.H.Akbari

Ministry of Energy

Improvement of Productivity and Economy of Electricity and Energy Office,
(IPEEEO) Iran

H.Ravaghi@gmail.com, Sm.sadeghzadeh@gmail.com, Ha.Akbari@gmail.com

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Abstract :

Iran is one of the most important developing countries in the field of glass industry in the Middle East. A comprehensive program and plan for optimizing energy consumption can create useful solutions and programs. It will also open new horizons before all countries.

This paper is suitable for the long-term programs of energy consumption optimization in the Iranian glass industry through modeling and optimization of energy flow, using the programming model of EFOM-ENV. At first, Iranian glass industry is modeled and then it will be optimized from a technical-economical viewpoint and with regard to internal and international policies, in a long term horizon, using different scenarios.

1- INTRODUCTION

NOWADAYS glass and glass products are considered the most important industries in most of the countries. Varieties of glass products, exclusivity of some of these

products and various applications of them have caused the impotence of this industry.

History: Glass has been found in different colors in the cold lavas of geysers for the first time. People of Bronze Age used to heat the natural glass and transform it into different shapes and apply it in their lives.

In Iran, Elamian and Iranian tribes were the first people who developed glass industry in those areas. Glass manufacturing as modern industries were started 80 years ago in Iran. Glass and crystal is a course that can be Independent due to the existence of primary sources inside the country and without any need to the primary materials from other countries.

Iranian Glass Company is the first unit of glass production in Iran with an extended and automatic method of Forklet. It started its activity in 1318(1939) with a capacity of 60 tons in a day (14000 ton in year) and with three productive lines equipped to Forklet vertical tensile machineries. [1]

Two years later in 1320(1941), The Allies occupied Iran, so its activities were stopped. It