

ENERGY- INTENSIVE PRODUCTION: SOCIAL, ENVIRONMENTAL AND ECONOMICAL CONSEQUENCES

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The increase in energy intensity can be explained by the growth in exports of goods with low added value and high energy consumption.

Brazil's current development strategy appears to increase the asymmetries when compared with the developed countries. While energy intensity has been declining, this indicator in Brazil seems, at least in the period here analyzed, to have been increasing in large part by increased exports of the studied products.

This tendency will be difficult to be reversed in short and medium terms, given the profound social lack of mobility and the lack of long-term industrial policies aimed at redirecting technology and training in productive chains which can add higher value products.

In continuing the current profile, environmental impacts and damages tend to be increasing, partly by the needs of large hydroelectric projects to address the demand for energy in these sectors and by increasing the extraction of natural resources whose prices are determined by the markets, without the social and environmental costs being incorporated.

There is a need for the implementation of public policies to establish targets for direct reduction of energy consumption in this group of industries, through measures that encourage the modernization of plants and to open possibilities of emergence of innovations that can reduce energy consumption in the production process. In addition this group of industries must be strictly monitored to reduce the environmental impacts of its activities and to ensure adequate working conditions for its employees.

The prevailing political situation contributes to blocking increases of current salaries - this should be taking place given increased productivity - and instead, it contributes to increasing levels of unemployment.

The reduction of hours in the workday is a structural issue which has been the object of intense controversy in the most advanced countries since the beginning of the current crisis. The effects include hiring more people, and a resulting redistribution of income, the free time increase for leisure activities, and for education, and social and cultural activities.

With the reduction of hours and extra shifts, another positive effect would be the reduction of stress, accidents, and exposure of individuals to the risks of their jobs and their workplace, while increasing the number of exposed individuals.

A restructuring of this kind should also contain as parameters the reduction of use of raw materials and particularly of fuels and electricity.

There is a worldwide trend to re-use wastes and by-products within the process in which they were generated and also to recycle scrap and material after consumption. This is found in several sectors in

the most advanced countries regarding distinct companies, products and the environment they are located in either for image or for marketing differentiation.

Accordingly, some industrial energy-intensive plants should halt new investments in expanding their production capacity in favor of reducing production or reorienting production for the domestic market, including in some situations, plant closures.

Brazil is characterized by presenting an array where the participation of energy sources considered as renewable (including hydroelectricity) reaches a proportion of 42.2% of all energy sources, leaving the country standing out in the international context, where fossil fuels still maintain a major participation in energy use.

However, it appears that the consumption pattern reveals an untenable character because its income is highly concentrated, and therefore there is a high degree of social exclusion.

Brazil falls into the new international division of labor as a country that supposedly will solve issues of climate and poverty, expansion of livestock, and soybean in the Cerrado (savanna) and Amazon in particular, give a sense of the impact that this dynamic would have both on ecosystems as well as on its population of small producers.

Vile must therefore reduce inequalities in a broader way than merely through compensatory measures, and have a vision for the future which transcends immediate interests. Renewable energy and sustainable conditions to meet these dual parameters of public action are of urgent significance. They imply, a vision of decentralized generation and distribution of energy. They open the possibility for innovation. We can envision a rich development of appropriate technology; the generation of jobs in numbers far greater than that provided in the current system; a synergy to be created locally between generation and distribution, and agro-industries and industrial facilities.

In fact, the main challenge for the current energy crisis and environmental forces is by default the need to redefine of production and consumption in our world. Industrialized countries seem hypocritical when they propose their development model for the world, for the entire world it is impossible, since it assumes the maintenance of a large part of humanity in inequity.

When offering cars and paths that may use ethanol or biodiesel under the seal of sustainability, they are ensuring that the development model will not change. Rather, it will continue based upon individual transport and the intensive use of natural resources. While we save fossil fuels, we remain spending energy on producing steel and vehicles. This "solution" avoids having to face the question: on the one hand, a redirection towards collective transport and railways, waterways and short sea shipping; and on the other, the urgent need to reduce production and trading, which are extremely energy consuming and which destroy local and regional economies.