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Coal: the poor's disaster & the rich's wealth

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Coal: the poor's disaster & the rich's wealth - The use of coal in Egypt: Disaster for the poor and riches for the wealthy

The use of coal is one of the most important issues that have recently been controversial. Despite the existence of several caveats concerning the use of coal in power generation or in cement factories due to its environmental damage – as carbon dioxide emissions from coal is 5 times its emission from natural gas – the government turned a blind eye on its use under the pressure of last year's energy crisis and the current fiscal year's budget deficit (370 billion pounds); and also due to the fact that the coal prices are relatively low compared to other sources of energy, including natural gas, diesel, or other oil products.

According to a report on the use of coal by cement plants early last year, there are about 19 cement companies that started to rely on coal as a major source of fuel at rates ranging from 85 to 95% after obtaining licenses. The report added that the total use of coal and coke by cement plants in one year amounted to about 3.4 million tons at a total cost exceeding 350 million pounds. However, the government has overlooked the damages that could be caused by coal, which raised diseases among Egyptians and had negative effects on the state treasury, according to environmental experts.

First: Expansion of the use of coal in power generation

The government intends to expand the use of coal in the generation of electricity. Egypt Electricity Holding Company (EEHC) has announced that it had received three international bids competing for the construction of the first coal-fired power station in the Hamrawin along the Red Sea coast at a capacity of 6000 megawatts.

The Ministry of Electricity is also planning to produce 7000 MW from plants using coal by 2025, along with the project to be implemented by AlNowais Investments, a UAE private regional conglomerate based in Abu Dhabi, which the Egyptian authorities seeks to complete its contract review during the current year, provided that execution should actually start next year within the framework of the plan the Ministry of Electricity aims to complete until 2035.

It is strange that – in coincidence with the announcements of the expansion of the use of coal in electricity – owners of cement factories face significant obstacles, especially after the Ministry of Environment revealed a set of environmental requirements for the use of cement, including its storage and safety during use, as well as limiting the imported quantities. Therefore, the National Cement Company has decided to halt operation due to these rules. “A decision to close the National Cement Company was taken by its board and general assembly not the environment ministry,” said Minister of Environment Khaled Fahmy on Sunday (Feb. 11, 2018). The decision came as the company could not implement environmental regulations, Fahmy said. He noted that the company “has been shut down for four months now”.

Second: Key requirements for using coal in cement production

- 1- Imposing restrictions on the amount of licensed annual coal so that the average thermal energy consumption shall not exceed 4000 MJ/ton of black cement clinker and 6,200 MJ/ton of white cement clinker.
- 2- The process of loading, unloading and handling of coal shall be carried out in the operating area automatically by using efficient equipment. The coal shall be stored in the operating area with limited quantities that could suffice operation for a period not exceeding 15 days. The coal shall also be stored in closed places inside semi-spherical stores or in hangars, each consisting of a ceiling and 3 closed sides provided that the

fourth side shall be furnished with a curtain in the form of strips to allow the passage of equipment.

3- Coal grinding shall be carried out in closed areas with the application of air pollution control measures. Ground coal shall be stored in silos with the installation of carbon monoxide monitoring devices inside the silo. Feeding coal-fired furnaces shall be carried out through air transport inside pipes. Combustion system inside furnaces shall be modified from a system that uses liquid or gaseous fuel to a system using ground solid fuel.

Third: Key requirements for using coal in power generation

1- Sites should be outside the valley area and along the coasts of the Red Mediterranean seas, taking into account the areas of environmental sensitivity, as well as the tourist activities and centers. In case of any inconvenience or differences in approval of the proper site, the Minister of Environment shall present this to the Prime Minister for making the decision. The areas affected by gas emissions should be identified, taking into account the target production capacity after completion of the project phases, and also the future expansions.

The amount of coal licensed annually shall be determined on the basis of an efficiency rate of not less than 40%, so that the coal consumption rate shall not exceed 340- 380 grams per kw/h, using boilers. The process of loading and unloading power generation coal shall be done on special docks according to the criteria followed by the ship unloading process.

Fourth: Why coal despite recent natural gas huge discoveries?

Coal is one of the most important sources of energy along with the natural gas and the nuclear power; and diversification of these sources is necessary, according to experts. Despite the recent discoveries of natural gas, it may end in a maximum of 20 years,

according to global estimates. As for the renewable energy, we still need a lot of time to rely on it. While gas and oil may disappear completely within the next 50 years, coal will suffice the world for 200 years to come, according to the estimates of the World Energy Council. Therefore, the scarcity of energy resources and the poor supply of renewable energy would introduce coal and nuclear power as major sources of energy.

Fifth: Use of coal in favour of the interests of the rich

Environmental experts described the expansion of the use of coal as “committing suicide”, and stressed that the government's efforts to use coal in industry and electricity generation have been compliance with the demands and interests of the rich industrialists and owners of factories. They refused to consider coal as the cheapest and most abundant type of fuel for the following:

- 1- The government wastes the natural gas rights by improperly supplying gas to factories of energy-intensive industries at subsidized prices, even lower than the international prices.
- 2- The goal of using coal in energy-intensive industries is to achieve a higher margin of profit serving manufacturers against the health of citizens.
- 3- We can completely eliminate the use of coal in industry by working on a national plan and vision for rationalizing electricity consumption, an approach which has been fully adopted by European countries recently.
- 4- The expansion of the use of coal in Egypt contradicts an AU memo signed by the Minister of Environment a few days ago in Addis Ababa, calling on African countries to suspend the use of coal in industry.