

Discussions in Russia on Where to Position Coal-fired Power Generation

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On November 29, I had an opportunity to participate in a conference titled “SKOLKOVO Energy Dialogue: The Role of Coal-Fired Power Generation During the Energy Transition” in Moscow. Sponsored by the Moscow School of Management, SKOLKOVO, a Russian higher education institution, the conference dealt with where to position coal-fired power generation during the world’s energy transition, as indicated by the title. Some 50 Russian government officials, energy industry people and experts took part in the conference for vivid discussions. In the following, I would like to summarize impressive points of the discussions at the Moscow conference.

According to the BP Statistical Review of World Energy, coal accounted for 38% of global power generation in 2017, the largest share among electricity sources, followed by 22% for natural gas, 16% for hydro and 10% for nuclear. The share for remarkably growing renewable energy including solar photovoltaics and wind was limited to less than 10%. In Asia growing as the gravity center of the global energy market, coal’s share of power generation was dominantly high at 60%.

At present, coal is the largest electricity source in the world, particularly in Asia, because of its abundance, price competitiveness and significance as a domestic energy source. As responses to climate change, air pollution and other environmental problems have grown more significant, however, the market environment has become severer for coal. The future course of coal has grown more uncertain, as indicated by movements for divestment in coal and other fossil fuels. In this sense, the Moscow conference dealt with the very important issue of where to position coal-fired power generation.

I was interested in why the matter was vividly discussed in Russia. In Russia, coal’s share of total electricity generation was 14% in 2017, the fourth largest following 49% for gas, 19% for nuclear and 17% for hydro. However, coal exerts great influence on local economies and employment mainly in coal producing regions in Russia. Given that Russia is a coal exporting country, the future course of domestic and foreign coal markets and coal-fired power generation is expected to exert grave influence on the Russian coal industry. These conditions represent a background for the conference. In countries with leading domestic coal industries, discussions on coal or coal-fired power generation tend to be politically and socially sensitive. In the United States, coal’s revival has been touted under the Trump administration. Germany is struggling to achieve its ambitious greenhouse gas emission reduction target while its domestic coal/lignite industry plays a key role in the respective regional economy in the country.

Through the conference, I felt that many participants recognized the significance of climate change and air pollution countermeasures but called for balancing such countermeasures with coal's contributions to energy security, to competitive electricity supply and to coal producing regions' economies and employment, indicating the sensitiveness and complexity of where to position coal-fired power generation.

Significant regarding such balancing are how far Russia would enhance climate change countermeasures and whether Russia would toughen emission standards for such pollutants as sulfur and nitrogen oxides and PM2.5 to address air pollution. Environmental problems are externality problems for the energy market. Government regulations to address environmental problems are vitally important for the energy market. Government regulations depend on a government's "perception" about how seriously environmental problems are to be taken and how faithfully they should be addressed. The perceptions of various stakeholders and the government leading regulations in Russia would hold the key to where to position coal-fired power generation.

In addition to discussions about regulations in Russia, another interesting point at the conference was participants' great interest in Asia's coal-fired power generation and coal market. Many of them presented a view that while European countries such as the United Kingdom may steadily phase out coal and reduce coal demand, Asia may continue to select coal as a competitive electricity source meeting its robust electricity demand and keep its coal demand high. They also argued that Asia would expand coal imports as Indonesia and other Asian coal exporters lose their coal export capacity. Participants noted that the Russian coal industry would have opportunities to expand exports and production.

Even if Asian coal demand and imports expand over a long term, however, who will cover the expansion will be determined through severe market competition. There is no guarantee that the Russian coal industry will benefit from the Asian coal demand expansion. However, it was interesting to find that Russians were viewing the expanding Asian market as providing Russia with a business opportunity. This may be partly because Russia's oil and gas/LNG industry has successfully expanded into the Asian market.

Energy transition is very susceptible to political, economic, social and technological factors, being plagued with great uncertainties. It is very risky to bet on a single energy transition path. Representative long-term energy outlooks and various energy scenarios in the world indicate their wide gaps. However, gaps concerning coal are particularly wide. Some project steady growth in coal demand while some others indicate that coal demand would immediately peak out and decline over a long term. In the face of such uncertainties, we can or should begin with objective and scientific analyses of facts and realities.

While introducing the IEEJ Outlook 2019 at the conference, I argued that as there is not any almighty energy source that can resolve energy problems, we should combine all available energy options in a balanced manner while overcoming each energy source's weak points and that the ideal energy mix could differ from country to country. This is because I felt that these arguments would be appropriate for the discussions in Russia.

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