

GLOBAL ENERGY TODAY: THE ASIAN NEXUS

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Article 6

CONCLUSION

Taken together, these four articles about energy in Asia point up a number of essential realities that are true today and will almost certainly intensify in the future. Here, in a brief list, are the main ones:

- Asia has become the new center of global energy use, a truth that encompasses both carbon and non-carbon sources.
- In this region, as everywhere else, energy issues are about politics no less than technology and economics.
- In Asia as in most of the world, decisions about energy matters are made by central governments, not companies, residents, or local institutions.
- Reliable access to electricity, a key basis for economic development, remains a core challenge in much of the region.

- Asian countries, taken together, produce and consume more than twice as much coal as the rest of the world.
- Energy geopolitics in the Asian region are a source of both conflict and cooperation.
- Asia is fast becoming the global center of renewable energy and nuclear power, with plans to expand both considerably.
- No country today, even Russia or Saudi Arabia, is “energy independent,” because all are involved in energy trade (imports or exports) upon which they strongly depend.

This list does fair justice to what the authors have discussed, though it can hardly be said to exhaust what could be said.

Asia today is where the future of energy must be worked out. Germany, France, or the U.S. are not workable models for India, Japan, or China. Most Asian nations import the greater portion of the energy sources they need. In the case of oil, the countries just mentioned vary in their import dependence from 65% for China to 75% for India and 98% for Japan. This creates a high degree of energy insecurity.

At the same time, Russia, Kazakhstan, Turkmenistan, and Indonesia are all major exporters of oil and gas, while Malaysia, Vietnam, and Brunei export smaller volumes. The problem for these countries is high dependence on such exports as a source of easy revenue. This tends to suppress

development of other industries and leave the national economy vulnerable to changes in oil prices. As Russia found out once again in 2014-2015, when prices collapsed from over \$100/bbl to under \$50, such vulnerability counts as a form of energy insecurity too. As Scott Radnitz writes in his article, resources alone are not enough to cure poverty and inequality. Nor, as Michael Walstrom indicates, are they enough to satisfy the energy needs of their host nation if political instability and corruption are present. Moreover, resource wealth or poverty are increasingly understood to be irrelevant to the need for increasing the efficiency of existing technologies, as Lysandra A. M. Bitticaca indicates.

The one traditional energy resource that Asia has in great abundance is coal. Large-scale use of this fuel has brought another set of problems, including elevated emissions and lethal air pollution. If there be any long-term benefit to the situation, it might be to force Asian nations to move more quickly toward non-carbon sources. Another key resource in the region, after all, is human capital. A number of countries in the region have the capability to advance renewable and nuclear technologies significantly.

This brings up a last vital point. Asia is now home to 17 of the world's 31 megacities, defined as those with more than 10 million people. By 2040, the region is projected to have 30 or more such metropolitan areas. Well over half the world's new buildings in the next three decades will be in Asia. Cities, whatever their size never sleep and are the epicenters of economic activity and energy use. They demand a diversity of sources that can guarantee dependable supply at all times. If Asian countries can find ways to reliably power and provide mobility in their vast urban areas, while reducing or even erasing the problems of carbon energy, they would contribute greatly to a better future for humanity.