

## Globalization: Challenges and Opportunities in Shaping a Common Future

By John P. Ferriter\*

I am happy to help set the stage for this discussion on the challenges and opportunities offered by globalization, as all countries, in every stage of development, will face their own set of unique challenges from this process. Here, I will concentrate on the policy dimensions of globalization as viewed by the International Energy Agency (IEA). But first, let me give you a snapshot of the changing profile of the world energy landscape to the year 2010.

### Energy Demand: Outlook To 2010

The IEA carefully tracks developments in world primary energy demand in the annual *1996 World Energy Outlook*. From the *1996 Outlook*, one can glean the main features of the energy landscape to the year 2010, specifically:

- World primary energy demand will climb 50 percent from 1993 to 2010 – continuing its steady growth as it has over the last two decades.
- We will continue to live in a fossil fuel world – 90 percent of global energy consumption today is fossil fuel and this will continue at 90 percent of world consumption through the year 2010.
- Oil will continue its dominance in this fossil fuel world – 40 percent of total world energy demand will be met with oil in 2010.
- Demand for solid fuels, principally coal, is expected to rise steadily in the outlook period to 2010 (at an average annual rate of 1.7 to 2.2 percent). Overall, the share of solid fuels in the primary fuel mix is likely to remain stable, but there will be significant changes in the pattern of world solid fuels consumption. Countries such as India and China are very coal intensive. Growth in coal demand in the non-OECD countries could be as high as 3.8 percent per annum, and use in power generation could be as high as 6 percent per annum. Of course, there will be environmental consequences to the fossil fuel dominated future. Energy-derived CO<sub>2</sub> emissions will be up 50 percent in 2010.
- A structural shift in the shares of different regions in world energy demand is likely and we could see the OECD share of world energy demand fall from around 55 percent in 1993, to less than 50 percent in 2010.
- A dramatic increase in demand is likely in the Dynamic Asian Regions – China, East Asia, and South Asia – whose share could double to more than 25 percent of world energy demand by 2010.
- The Dynamic Asian Regions (DAR) lead the world in contributions to incremental energy demand. The IEA *WEO* sees Asia accounting for 44 percent of world demand growth to 2010. South Asia alone will account for 11 percent of that figure.

### Asian Oil Demand Import Dependence Continues To Rise

The oil demand of the DARs is expected to increase

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substantially up to 2010, with an average annual growth rate close to 5 percent. The DARs will then account for 42 percent of the increase in world demand for oil between 1993 and 2010.

Since their oil production is expected to be sluggish, their dependency on imported supplies is likely to increase. The DARs currently import around 40 percent of their oil consumption, a figure expected to grow to 65 percent in 2010, the bulk of it from the Middle East.

### Globalization: Challenges and Opportunities

The two decades since the first oil shock have witnessed profound changes in the world economy. Globalization has been driven by growth in trade, growth in international investment, the expansion of financial markets, and the political integration of the East and the West. It makes the world economy more and more integrated.

Energy, especially oil, is an important part of the globalization process. In the globalized energy markets, owning resources remains a significant national asset; but creating conditions which permit their exploitation at reasonable cost is the real issue. Ownership, and deciding the desired pace of exploitation, are matters for sovereign national decision; realizing those decisions depends on moving with the flow of international markets. Mobilizing the international capital and technology of the energy consuming countries may be necessary to achieve exploration, development and production goals.

### Globalization

Features common to both energy and the economy are:

1. *Growth in trade:* Since World War II, and especially during periods of high growth, trade has grown much faster than output generally – over the past ten years on average twice as fast.
2. *Growth in international investment:* International investment has grown even faster than trade; in fact foreign direct investment has grown four times faster than trade or ten times faster than output since 1983.
3. *Growth in financial markets:* Money markets have grown faster than trade, investment or output.
4. *Shift in output and consumption:* But perhaps the most important phenomenon is a shift in the world's center of gravity and the growing importance of non-OECD economies.
5. *Political integration:* An even wider phenomenon is the new post-Cold War world order – an international environment where economies in transition and other formerly nonmarket economies are rapidly integrating themselves into world political and economic structures.

### Structural Reform

Structural reform covers a number of different developments, including:

1. *Privatization*
2. *Increasing competition*
3. *De-monopolization:* Particularly to unbundle monopoly and competitive activities.
4. *Deregulation:* Covering both the removal of regulations and the reassessment of regulatory methods in areas where regulation remains appropriate. Regulatory reform is itself part of a wider phenomenon – the drawing back by

governments from direct intervention in markets.

### **Policy Issues Emerging From Globalization**

A number of questions spring to mind, particularly regarding the role of governments. Where will the money come from to finance massive investments needed in the energy sector? What fuel sources are to be used in meeting demand for energy? And from where are they going to be extracted and traded? How can energy security and environmental sustainability for Asia be achieved? If these questions seem familiar to you, it may be because they are the same questions that IEA countries have been wrestling with over the past two decades. I hope that other countries and, in particular, the dynamic economies of Asia, will be able to benefit from our experience in these areas and avoid repeating our mistakes.

Let me highlight here what we believe have been the major lessons for us over the past 22 years, which may be of relevance to the dynamic Asian economies.

### **Market Principles**

Efficient use of energy and development of the energy sector depend on sound energy policies based on market principles. More transparent and open markets – with undistorted pricing, together with other steps to encourage diversity, efficiency and flexibility within their energy sectors – enhance their functioning, particularly in times of uncertainty.

The challenge for energy policy in the 1990s is how to best safeguard energy security and to meet environmental goals in the open and competitive markets increasingly being established in response to global economic integration. The energy industry has been responding to the challenges and opportunities of globalization by strategic restructuring to maximize competitiveness and to internationalize activities.

Governments are increasingly withdrawing from direct involvement in the market, whether through ownership of operating companies or through direct regulation. Market forces alone, however, cannot secure either energy security or a clean environment. The role of government is to facilitate commercial activities, rather than replace them.

### **Supply Security**

We still have a fossil fuel future for as long as we can foresee. Most Asian countries will become increasingly dependent on imported oil in the next 15 years, and the major source of supply of that oil will be a small number of countries in the politically fragile Middle East.

Rising oil imports remains a key concern demanding strong security of supply and emergency response policies. Before 1992, oil imports primarily came from Asia-Pacific nations – with Indonesia, Malaysia, and Australia accounting for more than 50 percent of its total crude imports. But, this situation has begun to shift, and in 1993 the volume of crude imports from the Middle East exceeded the flow from Asia for the first time.

Oil supply security is a global issue and non-OECD countries should be encouraged to take their share of protecting against future oil supply disruption by holding emergency stocks. This applies particularly to those countries, which are seen to have a growing dependence on oil imports, notably in Asia.

Another important step to improve security is to slow the rate of oil demand growth. This can be done by a combination of greater efficiency of energy use and increased substitution by other energy sources, particularly natural gas.

The oil sector's deregulation can be considered one of the measures to enhance oil supply security.

Supply diversity adds to oil security. Indeed, it is the increasing dependence on one geographic area, the Middle East, which is of prime concern in the longer term outlook.

### **Investment**

Capital availability is important, but the attractiveness of the terms and conditions of individual projects is even more important. Transboundary capital flows have increased significantly with globalization. In fact, capital markets have become competitive in their own right. Capital will go where it gets the best return at acceptable risk.

It remains the role of government to create an atmosphere where capital markets can function competitively and efficiently. Governments should pursue macroeconomic reforms, restructure energy industries, and end subsidies and price controls, to help build a domestic market based on sound economic principles. Reforms are not merely a matter of opening the market to private and foreign investors and providing them with a package of incentives in a particular sector, it involves changing the way by which the whole system is working.

Private investors today have a wide choice of where to put their money. What will make them choose India instead of, say, Latin America? What sort of investment climate do Indian policymakers need to create in order to attract the capital for required projects? Let me mention a few of the most important elements that Indian (indeed all) governments should strive to provide:

1. Ensure general macroeconomic reforms that promote stability and growth throughout the economy. Not only will economic stability attract investment, but the economic growth it promotes will increase the demand for energy, in turn making investments in the energy sector more attractive.
  2. Redefine their role from energy provider to energy regulator. To do this, they need to create strong legal and regulatory systems.
  3. Establish a good track record of enforcing contracts and regulations, and of not arbitrarily changing them.
  4. Create a level playing field by eliminating special favors to government-owned or domestic companies to the detriment of private or foreign ones. This should apply, for example, with respect to access to infrastructure, and to taxes and subsidies.
  5. Reduce and eventually eliminate subsidies and price controls that distort the market and make it difficult for investors to get a good return on their investments. In any case, it is more efficient for governments to address social needs directly.
  6. Enact favorable tax regimes, including reasonable depreciation allowances and low import tariffs on equipment;
  7. Ensure transparency of legislation so that investors may more easily compare investment regimes across countries.
- There is also a need for transparency in practices, specifi-

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- cally the elimination of corruption.
8. Eliminate currency restrictions that make it difficult for companies to gain access to foreign capital markets and difficult for foreign companies to repatriate profits.
  9. Improve physical infrastructure affecting the energy industry, such as road and rail transportation.
  10. Ensure favorable conditions for energy trade, both within and between countries. Investors will need to see that they can sell their product.

Creating an attractive climate for investment and trade is one of the most important ways to ensure energy security.

**Environment**

One factor that will significantly affect future energy demand and investment in the industry is growing concern about the effect that energy use has on the environment. This encompasses both local and global pollution – particularly the greenhouse effect. By 2010, world carbon emissions could be between 30 and 42 percent higher than in 1990. Most of the growth in CO<sub>2</sub> emissions will occur outside the OECD area, and by 2010 the OECD could account for only 40 percent of the world's energy-related carbon emissions.

Only by close cooperation between government and the private sector and careful analysis of experience in other countries can the most cost-effective solutions to these problems be found, while achieving the desired environmental goals with the least impact on economic growth and industrial competitiveness.

**An Overview of the International Energy Agency**

For those who may not know the IEA, let me say a few words about the Agency. The IEA was created in 1974, in response to the first oil shock to ensure its members' collective energy security. At that time, the essence of energy security was seen as an uninterrupted oil supply.

Attention focused on developing emergency preparedness measures to respond to a major disruption in the international flow of crude oil, and on promoting long-term cooperation and research and development activities among members to reduce their dependence on imported oil.

While these activities continue today as fundamental elements of the Agency's work, events of the last several years, in particular the end of the Cold War, have dramatically altered the world political and economic scene, and thus changed the basic environment in which world energy markets function.

Principal among these changes is the growing importance of non-IEA countries as energy consumers. Non-IEA countries account for an increasingly important part of global energy demand. They will also be of increasing significance in global energy related environmental issues. In recognition of this evolving situation, the IEA has been expanding its global outreach. Our activities with Non-Member Countries (NMCs) have intensified in recent years and will continue to do so in the years to come. The goal of these activities is to assist NMCs in developing energy strategies and adopting energy policies that will contribute to their economic development and enhance global energy security. We are now considering new forms of cooperation between the IEA and major energy players which are not candidates for member-

ship, such as India.

**Conclusions**

Energy is an important part of the globalization process. Government's should pursue structural reforms to promote market liberalization. These reforms should include:

- Building transparent and open markets;
- Increased competition; and
- Regulatory reform.

The role of government is changing: There is less direct intervention; competition has increased; and regulatory reforms are underway.

Security of supply remains of concern. We should remember that energy efficiency improvements that reduce import dependence compliment a successful energy security policy.

We must break the pattern of energy intensity in IEA and developing countries to allow the benefits of a modern economy to be enjoyed by all. Resource and environmental constraints will not allow energy intensity at current OECD levels, for example in India or China, when these countries achieve equal levels of per capita economic activity.

A stable and open investment regime is critical; environmental concerns are increasingly important.

An efficient energy sector is a critical factor for any nation to remain competitive in the globalized economy. Finding the right balance in this crucial task is the principal challenge that, if realized, can offer the greatest opportunities for any nation, developed and developing alike.

**Noteworthy**

*Campbell Watkins* has been appointed chair of the American Statistical Association's Energy Statistics Committee. The Committee advises, among other organizations, the Energy Information Administration of the U.S. Department of Energy. Watkins is a past president of the IAEE and a Principal at the Law & Economics Consulting Group. In November of last year he delivered the Malavlya Memorial Lecture in New Delhi at the invitation of the Oil and Natural Gas Corporation of India. The title of his lecture was *Windows on Oil Exploration: The Estimation of Oil Supply Functions*.

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