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India's quest for energy in Latin America

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Abstract

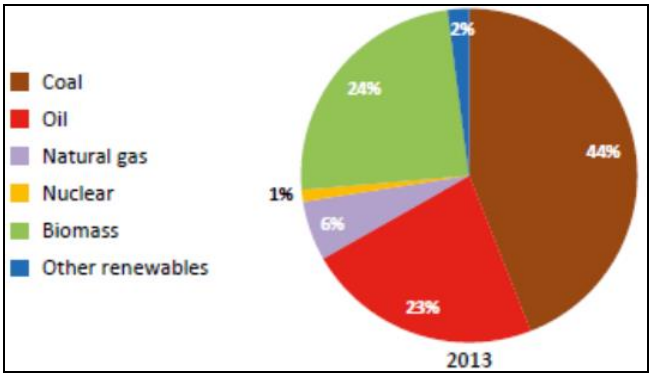
The uninterrupted, reliable and a stable supply of energy is an important issue for all countries especially for India which is facing a critical challenge of meeting a rapidly increasing demand for energy. India ranks fifth in the world in terms of total energy consumption. To meet the aspirations of over 1.2 billion people of its population, it needs to identify the challenges facing the energy sector and explore new avenues and areas to accelerate the development of the sector. Latin America in this regard holds prominence.

Energy interdependence and energy trade require continuous collaboration among both producers and consumers to ensure the security of the entire supply chain. The proposed paper will look at the evolution of ties between India and Latin America over the past decade in the field of energy and analyse the challenges in this regard. A case study will be made in India and Venezuela energy ties. It will look at the China factor whose presence in Latin American energy sector is overwhelming and profound.

Keywords: energy security, India, Venezuela, Latin America

Introduction

Energy is the driving force in the economic growth and security of any nation of the world. The future economic growth of a country like India with a population of over 1.2 billion undoubtedly depends on the long term availability of the energy from the sources that are available, accessible and is friendly to the environment. India is facing a critical challenge of meeting a rapidly increasing demand for energy. It was the third largest consumer of energy after China and United States in 2013 and its increasing demand for energy needs have made it highly dependent on energy imports irrespective of notable reserves of fossil fuels (EIA 2016). India's energy mix is dominated by coal (44%) followed by traditional biomass and waste (24%) and petroleum and other liquids (23%). This is show in Figure 1.



***Source*:** International Energy Agency

Fig 1: Total Energy Consumption in India

The ever increasing demand for crude oil and petroleum has made India the fourth largest consumer after the United States, China and Japan in 2015. It is also the fourth largest net importer of crude oil and petroleum products (EIA 2016). By 2020, India will domestically produce only one-half of its fossil fuel requirements as against 60 per cent in 2012, thus raising serious concerns relating to its energy security (EIA 2012).

India had about 750 Million metric tonnes of proven oil reserves in April 2014 which is the second-largest amount in the Asia-Pacific region behind China. But the gap between oil demand and oil supply is widening day by day.

The concept of energy security gains credence in this aspect. The energy security system was created in response to the energy crisis owing Arab Oil embargo caused by the decision of the OPEC countries to withhold oil shipments to the US and some of its western allies due to their support of Israel in the Yom Kippur War had increased oil prices since 1973 and the idea of energy security has assumed prominence (Perovic 2009). The crisis led the industrialised countries to come together and coordinate in the event of a disruption in oil supply, collaborate on energy policies and make sure that any future use of an "oil weapon" is deterred.

Energy security is simply defined as the availability of sufficient supplies at affordable prices but different countries have interpreted what the concept means for them differently (Yergin 2006) [14]. Energy-exporting countries mainly concentrate on on maintaining the "security of demand" for their exports, which generate the over whelming share of the state revenues. On the other hand the developing countries are concerned with how changes in energy prices affect their balance of payments. For China and India, energy security now lies in their ability to rapidly adjust to their new dependence on global markets, which represents a major shift away from their former commitments to self sufficiency (Yergin 2006) [14].

Countries must abide by some principles to maintain energy security which is stated below

- The first is the diversification of supply. This will help in reducing the impact of a disruption in supply from one source by providing other alternatives which will help in

serving the interests of both consumers and producers, for whom stable markets are a prime concern.

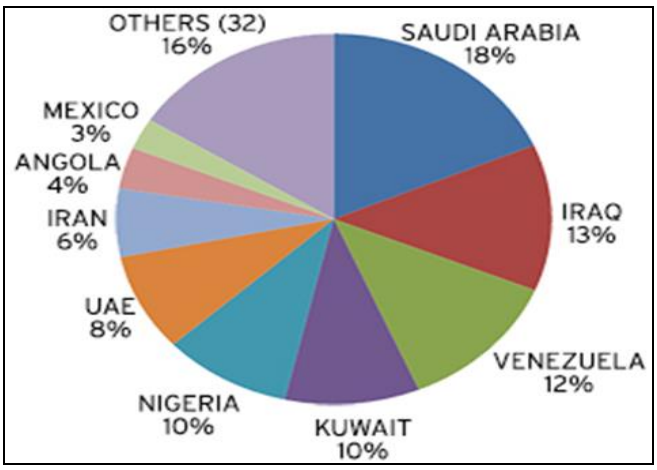
- The second principle is resilience that acts as a buffer against shocks and facilitates recovery after disruptions. Many factors lead to resilience that include sufficient spare production capacity, strategic reserves, backup supplies of equipment, adequate storage capacity along the supply chain, and the stockpiling of critical parts for electric power production and distribution.
- The third principle is recognising the reality of integration with only one oil market which is a complex and worldwide system.
- The fourth principle is the importance of information as it underpins well-functioning markets (Yergin 2006) [14].

Sovacool (2010) [10] has given four aspects of energy security: availability, affordability, efficiency and stewardship. Availability means sufficient and uninterrupted supply, minimal imports, diversified sources and their physical security. Affordability refers to stable prices and confidence relating to their future outlook, and equitable access to energy resources (mainly electricity and fuel for heating and cooking) for the populace in general. *Efficiency* means the most efficient use of energy resources, while *stewardship* refers to policy makers giving priority to social and environmental concerns.

In India, the crude oil dependence has led the energy companies to diversify their supply sources and look beyond the gulf countries and Latin America holds prominence [1].

Energy interdependence and the growing scale of energy trade require continuing collaboration among both producers and consumers to ensure the security of the entire supply chain. Long-distance, cross-border pipelines are becoming an ever-larger fixture in the global energy trade

The crude oil imports of India from the different countries is shown in Figure 2.



***Source*:** Energy Information Administration

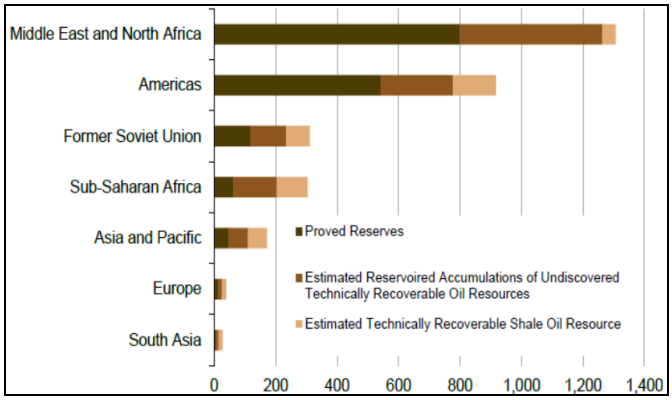
Fig 2: India's crude oil imports, 2015

[1] Over 50 per cent of India's oil imports come from the countries of the Gulf Cooperation Council (GCC). India's import dependency on the Gulf would be over 70 per cent if imports from Iran and Iraq are clubbed together.

India and Latin America

Over the past 15 years, India's ties with Latin America has shown meaninghul dynamism. Energy is an important area of cooperation between India and Latin America and Caribbean countries (LAC) and holds enormous growth prospects in future. Robert D Kaplan (2014) has stated that the all energy routes leading to the Indo-Pacific region with 85% of consumption coming from this region.

Latin America is an energy rich region which is evident from the fact that it has about 11 per cent of the world's total oil and 5 per cent of natural gas reserves. Ninety percent of oil and gas are concentrated in countries like Venezuela, Brazil and Mexico.



Source: U.S. Energy Information Administration, Oil and Gas Journal, U.S. Geological Survey, EIA/ARI World Shale Gas and Shale Oil Resource Assessment

Fig 3: Regional Oil Reserves and Resources, 2012

Oil imports from LAC to India have grown to 9 per cent of total by 2011 from only 0.5 per cent in 2005. The major crude oil importing countries are Brazil, Mexico, Venezuela and Colombia. In 2011–12 India's import of crude oil from these countries exceeded $10 billion (Bhojwani 2012) [3]. Over the years, oil imports from LAC have grown to 9 per cent of total by 2011 from only 0.5 per cent in 2005.

Energy cooperation between India and Latin American countries are as follows:

- Brazil, the largest country in the region is an important trading partner of India. India's energy relationship with Brazil varies from joint ventures in oil and gas (including deepwater fields) with Indian investment of over US$ 600 million, complemented with export of diesel by Reliance in exchange for import of oil, and a renewable energy initiative. Crude oil forms the largest component of Brazilian exports to India. Both the countries are collaborating on joint R&D efforts in bio ethanol and second-generation biofuels. Cooperation on nuclear energy is also on the agenda of both the countries. India has signed a civil nuclear cooperation agreement with Argentina, the only LAC country with which it has such a pact.
- ONGC Videsh has invested over US$ 600 million in oil and gas joint ventures in countries like Colombia, and oil production has already commenced in some oilfields. Reliance and Essar also imports Colombian crude oil. Essar struck a crude import deal with the nation's state-owned oil company Ecopetrol. Reliance Industries has

invested US$ 50 million in Colombian energy, while the Aditya Birla group is in talks to acquire Colombian coal mines for US$ 1 billion.

- Indian equity in Cuban oil and gas blocks has totalled US$70 million, though production has not yet commenced in any of the fields. OVL is working in Cuba for deep water exploration.in Blocks N-25 to N-29 and N-36 in Cuba's exclusive economic zones.
- In Peru, Reliance and Jindal have separately acquired oil and gas exploration blocks.
- Ecuador is also on the trade map and ONGC Videsh is reportedly bidding for oil blocks in Ecuador in partnership with the nation's state-owned energy corporation. However, Ecuador's reluctance to allow production sharing has limited Indian investment in the country.

Case Study Venezuela

Venezuela, the oil giant in the region with the world's largest reserves of petroleum, has been of particular focus. Venezuela as a founding member of Organisation of Petroleum Exporting Countries (OPEC), plays an important role in the global oil market.

The oil industry was nationalise in 1976 and Petroleos de Venezuela S.A. (PDVSA), the country's state-run oil and natural gas Company was created. The state oil company accounts for a significant share of the country's gross domestic product (GDP), government revenue earnings and export earnings.

The Venezuela allows foreign firms for investments, but requires joint ventures with PDVSA holding at least 60% equity. Major joint venture partners include BP, Chevron, China National Petroleum Corporation, ENI, Petrobras, Statoil, and Total.

The Magna Reserv aproject which is in the Orinoco belt operates through partnerships between PDVSA and foreign companies—mostly NOCs—from Chávez-friendly governments. It is believed that the project will contribute to the "creation of a multipolar world".

The main extra heavy crude oil and bitumen deposits are mainly found in the Orinoco Belt in central Venezuela. The area is spread over an area of 22,000 square miles and the belt is is divided into 36 blocks.

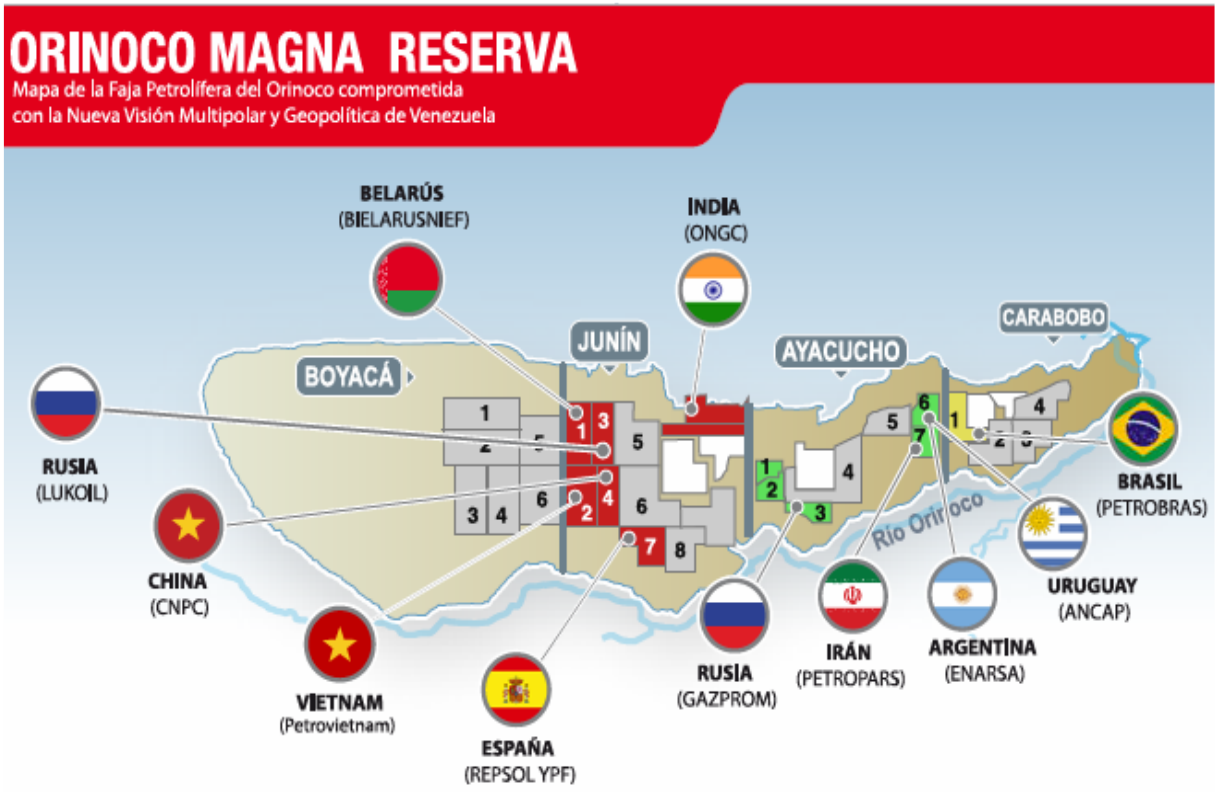
According to a study released by the U.S. Geological Survey, the mean estimate of recoverable oil resources from the Orinoco Belt is 513 billion barrels of crude oil.

The major oil fiels are shown in Figure 4.

***Source*:** Global Security 2006

Fig 4: Oil Fields of Venezuela

The Magna Reserve project has partners from countries Argentina (Enarsa), Belarus (Bielarusnief), Brazil (Petrobras), China (CNPC), India (ONGC), Iran (Petropars), Russia (Grazprom and Lukoil), Spain (Repsol YPF), Vietnam (Petrovietnam), and Uruguay (ANCAP). The Magna Reserva project divides the Orinoco belt into four regions –Carabobo, Junin, Ayacucho and Boyaca. These four regions are subdivided into 27 blocks. Fourteen of them will be developed by PDVSA and the rest will be through joint ventures with the NOCs of different countries that will have 49 percent ownership stake. It is shown in Figure 5.



***Source*:** PDVSA

Fig 5: Map of NOC Partners in the Magna Reserve Project

The Carabobo 1 region of the Orinoco belt is being developed in cooperation with Repsol YPF (11%), Petronas (11%), ONGC (11%), Indian Oil Corporation (3.5%),

The expected production output was 400 thousand barrels per day (64×10^3 m^3/d) by 2013 and the upgrader is expected to be ready by 2017.

Joint ventures between ONGC Videsh and Venezuela's state-owned oil company PdVSA have involved a total of US$ 2.6 billion of investment over the coming years, with production projected to reach 85,000 barrels per day (bpd) by 2016.

In the year 2012, India surpassed China to become the largest importer of crude oil in Asia and the third largest in the world.

Venezuelan state oil firm PDVSA has inked funding deals worth US$1.45 billion with the Government of India's Oil and Natural Gas Corporation (ONGC) and local company Delta Petroleum.

The deals include a US$318 million investment loan from ONGC and US$1.

DP Delta Finance, owned by Venezuelan businessman Oswaldo Cisneros is helping in meeting the funds. The money will be used to significantly expand production in PDVSA's partnerships with the two companies. According to the figures provided by Oil and Mining Minister Eulogio Del Pino, the firm is looking to double generation levels at its Indo-Venezuelan venture in the Orinoco Oil Belt to 40,000 barrels of oil per day from 20,000, while expanding production from its project with Delta Petroleum in Monagas state from 40,000 to 100,000 barrels per day.

Reliance Industries Limited (RIL) and PDVSA, the state oil corporation of Venezuela have signed two agreements for a period of 15 years to boost extra crude oil production in Venezuela's Orinoco belt and sell 400,000 barrels per day of oil to India.

China in Latin America

China's increasing oil dependence to meet its economic growth has put energy security high on its foreign policy agenda.

Over the last decade, China's economic and geopolitical proximity towards Latin America had increased reflecting Beijing's desire not only to intensify its economic cooperation and trade with Latin America but also to create a 'sphere of influence' in the traditional 'backyard' of the United States. This positioning is seen as retaliation for the US containment and encirclement of China, and as a fulcrum in its rise as a global power capable of challenging US dominance and reshaping the current world system. The growing economic interdependence and integration between China and Latin America facilitated China to get access to

Latin America's growing markets, abundant resources and lucrative investment destinations in order to sustain its own economic growth (Zweig and Jianhai 2005, Yu 2015) [15].

On the other hand, Latin America's global trade and investment patterns have shifted over the past decade as it has dramatically expanded its economic relations with the Asia-Pacific countries, particularly China and India.

China-Venezuelan relations have developed rapidly over the years owing to the commonalities in economic and political goals and had been characterised by the 'Leap Forward' stage of development (Hongbo 2014) [8].

Both Venezuela and China are in support of global economic trends of multipolarisation, multilateralism, and on non-interference in other countries policy. Both countries stretched the need to secure the interests of developing countries and devote themselves to establishment of a new international economic order. Venezuela welcomed China's involvement in Latin America and firmly supported China in joining Western Hemisphere's multilateral organisations such as the Inter-American Development Bank. In return, China supported Venezuela in becoming a non-permanent member of the UN Security Council (Peng 2012). Venezuela viewed China as its ideological partner that would challenge the imperialist international system dominated by the US and its allies and create a multipolar power structure of several different but equal power blocs. So allying with China which has become a great economic-political influence would be beneficial in Venezuela's interests (Hermann 2013). The diversification of energy supply is an important feature of the energy security which is apt in Venezuela's case.

Energy cooperation has become the cornerstone of both countries' economic and trade cooperation. The ever increasing demand for oil from emergent economies like China, which is the second largest consumer of energy in the world have brought the two countries together for mutual benefits. On the one hand, Venezuela under Hugo Chávez had sought to develop ties with non-traditional markets including China in order to diversify energy exports, and to overcome its dependence on the US market. On the other hand, China urgent needs to diversify its petroleum supply sources to guarantee its long term energy security prospects have formed the bedrock of its relationship with Latin America in general and Venezuela in particular (Ratliff 2009; Peng 2012).

In May, 2001, the "memorandum of understanding of the State Development Planning Commission of the People's Republic of China and the Ministry of Energy and Minerals of the Bolivar Republic of Venezuela was signed on a Ten Year Energy Cooperation Plan," which drew up the blueprint for both countries' energy cooperation. There are at least five categories of agreements related to oil and energy issues:(1) oil supply agreements, by which Venezuela is engaged in the provision of oilto China; (2) establishing a joint venture to promote Chinese participation in the exploration and exploitation of oil in the Orinoco Belt; (3) financial cooperation agreements in which China provides loans to develop economic and social projects, and in return Venezuela pays them through crude oil supply to China; (4) agreements in which China supplies capital goods, such as drills or tankers, or services like technology and trains personnel; and (5) agreements on infrastructure, in particular the construction of refineries in China to process Venezuelan oil [2].

Over the period from 2001 to 2008, China's crude oil import volume from Venezuela grew increased sharply from 55,600 tons to 6.4 million tons. Venezuela has now become China's fourth biggest petroleum supplier.

In 2004, China's National Petroleum Corporation (CNPC) was given the license to 12 wells Zumano mature oil field, which has large reserves of heavy crude by Venezuela. To this end Petrozumano SA was created, to perform exploration and production activities in the states of Anzoategui and Monagas (Ríos 2013).

Both countries' energy cooperation and long-term trade development goals conform to this new model of heavy investment in Venezuela which is mutually beneficial. Besides energy cooperation, the two countries have come together in the domains of finance, technology, agriculture, and infrastructure development.

There are few aspects that India has to look into to increase trade and investments in Latin America.

There is lack of in-depth studies of key markets within sub-regions and even specific countries which create hurdles. Secondly, there is a need for evaluation and assessment of resource potential - oil, minerals, agricultural, forestry products, etc. – in the region so as to proceed with ideas to invest in projects in all these sectors.

Distance between India and Latin America is the hurdle for trsde and investments. The government of India should encourage and give incentives to shipping companies, to rationalise and reduce transport costs between India and the region. A serious examination and a dialogue with the Ministry of Commerce and Indian business to identify tariff codes which can be negotiated for mutual tariff reduction.

Higher educational institutions like universities and think-tanks on both sides need to be more proactive in undertaking more extensive research and build data bases which can help the official and business establishments to take affirmative actions and suitable decisions to promote collaboration.

Language proficiency in Spanish and Portuguese is important aspect of mutual collaboration and greater attention needs to be paid by India in this regard.

Results and Discussion

India's energy vulnerability has increased over the last decade and it is likely to see an upsurge in future. At this stage of economic development, India needs uninterrupted energy supply of energy resources. In a world of increasing interdependence, energy security will depend much on how countries especially India manage their relations with one another, whether bilaterally or within multilateral frameworks. Latin America holds great potential. But the level of engagement has not been explored fully and India needs to engage with Latin America at different levels.

Although trade between India-LAC remains small as compared to China, it has increased over the past decade. From 2000 to 2012, exports and imports between China and

[2] In February, 2009, China and Venezuela signed an agreement of "loans for oil" valued at 4 billion US dollars. The China Development Bank provided a loan of 4 billion US dollars to the Petroleos De Venezuela S.A. (PDVSA) in exchange for a stable crude oil supply from Venezuela

LAC grew nearly twenty-one-fold, reaching $259 billion. LAC exports to India grew thirteen-fold since 2000, reaching $17 billion in 2012, while LAC imports from India grew twelve-fold, reaching $15 billion.

Both India and China have similar foreign policy goals driven by energy in Latin America but the scale with which China is engaging in Latin America is much larger in magnitude backed by a comprehensive economic and political strategy.

The emergence of China and India as important players in in Latin America represents a new paradigm for the region, and had facilitated the expansion of South-South cooperation.

References

1. Ahmad Talmiz. India's Energy Security Challenges. Indian Foreign Affairs Journa. 2014; 9:351-369.
2. Bhaskar Bala. Energy Security and Economic Development in India: A Holistic Approach. Energy and Resource Institute; New Delhi, 2013.
3. Bhojwani, Deepak. India's Prospects in Latin America and the Caribbean. Indian Foreign Affairs Journal. 2012; 7(4):433-445.
4. Cheng, Joseph YS. Latin America in China's Contemporary Foreign Policy. Journal of Contemporary Asia. 2006; 36(4):500-529.
5. Dhall, Vivek. India's Energy Security. Vij Books India Private Limited; New Delhi, 2013.
6. EIA, Understanding Energy Challenges in India', International Energy Agency (IEA). URL: https://www.iea.org/publications/freepublications/publication/India_study_FINAL_WEB.pdf, 2012.
7. Accessed 2017.
8. Hongbo Sun. China-Venezuelan Oil Cooperation Model. Perspectives on Global Development and Technology. 2014; 13:648-669.
9. Pandey, Rahul. How Can India Achieve Energy Security? Economic and Political Weekly. 2006; 41(4): 303-306.
10. Sovacool Benjamin. (ed.) The Routledge Handbook of Energy Security, Routledge; New York, 2010.
11. Singh, Priti. The Politics of Energy Cooperation in Latin America. International Studies, 2009; 46(4):457-470.
12. Shuangsheng, He. China-Latin America Relations: Review and Analysis.
13. Paths International; Reading, 2010.
14. Yergin Daniel. Ensuring Energy Security, Foreign Affairs. 2006; 85(2):69-82.
15. Zweig, David, Jianhai Bi. China's Global Hunt for Energy, Foreign Affairs. 2005; 84(5):25-38.