

Chapter Seven

Brazil and Africa: Integration and Development through Expanding Energy Linkages

Chris Cote and Mark S. Langevin

Over a half century ago, then Brazilian President Jânio Quadros wrote in the pages of *Foreign Affairs*:

As to Africa, we may say that today it represents a new dimension in Brazilian policy. We are linked by our ethnic and cultural roots and share in its desire to forge for itself an independent position in the world today... I believe that it is precisely Africa that Brazil can render the best service to the concepts of Western life and political methods. Our country should become the link, the bridge, between Africa and the West, since we are so intimately bound to both peoples.¹

Quadros' vision to bring Brazil and Africa into close orbit took some time to mature as a foreign policy principle, but by the end of President's Luiz Inácio Lula da Silva term in office (2003-2011) it was clear that Brazil—Africa engagement was expanding rapidly.

President Lula's Foreign Minister, Celso Amorim, summarized the numerical dimensions of this engagement:

As result of the political priority attributed to the African continent in Brazilian foreign policy, the number of Brazilian resident embassies in Africa has more than doubled, now covering 39 out of the 53 countries... not only has political dialogue with African countries improved vigorously, but also trade between the two margins of the Atlantic has expanded fivefold ever since—from US\$5 billion in 2002 to US\$26 billion in 2008. Taken as a single country Africa would appear as Brazil's fourth commercial partner, only behind China, the United States and Argentina, ahead of traditional partners such as Germany and Japan.²

1. Jânio Quadros, "Brazil's New Foreign Policy." *Foreign Affairs*, Vol. 40, Issue 1, October 1961:19-27.

2. Celso Amorim, "Brazilian Foreign Policy under President Lula (2003-2010): An Overview," *Revista Brasileira de Política Internacional*. Vol. 53. 2010:234.

While Brazil was slow to bring about Quadros' vision of Africa-Brazil relations, the nation's solidarity with and interest in Africa now parallels the national defense policy's strategic emphasis on the "Blue Amazon" and the South Atlantic basin as a regional security sphere. Two Brazilian analysts, Abdenur and Souza Neto, argue that Brazilian national defense policy has recently changed in significant ways, including: (1) a newly emerging transregional focus on both South America and West Africa; (2) the adoption of a more precautionary defense posture relative to the South Atlantic given the massive offshore pre-salt hydrocarbon reserves, the country's export driven growth model and its dependence on safe and secure sea lanes; and (3) not only reviving the historic links between South America and Africa, but also developing a broader regional security strategy that emphasizes shipbuilding and the building up of naval forces.³ Towards these ends, Wiesebron reports that Brazil is currently investing in the modernization of its naval fleet, including the nuclear powered Submarine Force, for deployment in the South Atlantic; and

Because of that, Brazil is expanding its cooperation with the countries of West Africa; it is about supporting African countries so that the South Atlantic is the South Ocean, without the presence of "the North," or at least that this very presence does not jeopardize the interests of the South in general and Brazil in particular.⁴

Clearly, Brazil is busy implementing a South Atlantic development and security strategy, founded upon expanding regional South American integration efforts, but aimed toward providing a broader South Atlantic regional alliance to promote and accelerate deepening economic interdependence between Brazil, South America, and Africa. Currently, this transregional development is fueled by Brazilian foreign policy and through the agricultural and energy sectors, where economic and organizational linkages are quickly multiplying behind a number of Brazilian government initiatives and private sector

3. Adriana Erthal Abdenur and Danilo Marcondes de Souza Neto, "Brazil's Maritime Strategy in the South Atlantic: The Nexus between Security and Resources," in Felix Dane, ed., *Brazil Emerging in the Global Security Order*. Rio de Janeiro: Konrad-Adenauer-Stiftung, 2013:182-183.

4. Marianne L. Wiesebron, "Blue Amazon: Thinking: The Defense of Brazilian Maritime Territory," *Brazilian Journal of Strategy and International Relations*, Vol. 2, No. 3. Jan-June 2013:117-118.

investments. Currently, the agricultural and energy sectors, along with a quickly multiplying number of economic and institutional linkages—all driven by Brazilian foreign policy—fuel this transregional development.

Brazil's initial energy linkage to Africa began in earnest through its own search for national energy security developed by Petrobras' exploration and production activities in West Africa, especially Angola. Yet, today Brazilian government agencies, Petrobras and Eletrobras, and private sector firms are planning, launching, and administering a growing number of projects to achieve energy security and anchor economic development in a select set of African countries. These linkages, largely built from Brazil to Africa, weave together a transregional energy and development strategy that tends to incorporate a growing number of South American and African nation-states.

These linkages may expand and deepen to eventually compose a future foundation for collective energy security among Brazil and its South American and African partners, but it is not certain whether such efforts will be limited to the South Atlantic or become incorporated into a broader Atlantic basin project that ties together the North and South Atlantic through supply and demand exchanges along with a developing "governance space."⁵ For now, it is important to explore and examine these linkages to better understand whether Brazil can construct a bridge that deepens economic development by increasing energy production and consumption in Africa. Given these unfolding linkages, as well as Brazil's South Atlantic-centered defense and foreign policy framework, can Africa-Brazil cooperation become an essential building block to an Atlantic basin-wide energy community, or will it instead hinder this opportunity? Moreover, has President Dilma Rousseff advanced the broad, active engagement of the prior Lula government with Africa or has her administration adopted a more incremental approach to building a bridge to Africa through energy-related linkages?

5. Paul Isbell argues, in *Energy and The Atlantic: The Shifting Energy Landscape of the Atlantic Basin*. German Marshall Fund of the United States. 2012:21; that "the Atlantic Basin could turn out to be the ideal space within which the Atlantic's many energy economies begin to abandon the chimera of "national energy independence" and pursue instead—through a conscious framing of energy policy and a deliberate recasting of energy relations within the basin—an ultimately more sustainable, and therefore pragmatic, 'collective energy security.'"

This chapter explores these questions through an examination of Africa-Brazil energy linkages to identify possible answers and outcomes. The chapter proceeds through four sections, including: (1) Brazilian government policies and programs that initiate, support and frame energy related linkages; (2) hydrocarbons; (3) biofuels; and (4) electricity generation and transmission.

Brazilian Government Policies and Programs

Brazil's engagement with Africa is founded upon its South Atlantic collective security vision, but framed by its efforts to deepen structural and institutional horizontal cooperation between itself, South America and Africa. Towards this end, the Brazilian government has established and advanced an expanding set of policies and programs to structure its "South-South Cooperation"⁶ with Africa since former President Lula took office in 2003. The construction of this inter-continental, South Atlantic regional development bridge began under prior administrations, first with the military government in 1973 and largely carried out through the operations and investments of Petrobras, then a fully state-owned oil and gas company, in Angola. Subsequently, Brazil also played a contributory role in the founding and administration of the South Atlantic Peace and Cooperation Zone (often referred to as ZOPACAS) in 1986. Yet, it was not until the Lula government set out to implement a broad set of bilateral and multilateral cooperation projects in agriculture, energy, health, and workforce development, among other activities, that Africa-Brazil cooperation could be understood through a strategic lens.

Under Lula's administration, and subsequently under his successor President Dilma Rousseff, the Brazilian government established and instituted Africa-Brazil cooperation policies and programs, most of which are coordinated by the Ministry of Foreign Relations (MRE),

6. Carolina Milhorance summarizes Brazil's "South-South Cooperation" as essentially a horizontal effort to structure cooperative relations between governments and private sector actors integrated within policies and programs that enhance comparative advantages through the integrated development of human resources and organizations through both investments and trade. "A Política de Cooperação do Brasil com África Subsaariana no Setor Rural: Transferência e Inovação na Difusão de Políticas Públicas," *Revista Brasileira de Política Internacional*, Vol. 56, No. 2. 2013:7.

implemented through its division, the Brazilian Cooperation Agency (known as ABC), and often financed by the government development bank, the *Banco Nacional de Desenvolvimento Econômico e Social* or BNDES. Although there are expanding cooperative activities between African and Brazilian private sector firms and civil society organizations, these are all made possible through the diplomatic engagement between the Brazilian foreign ministry and its bilateral counterparts and regional international governmental organizations.

For example, soon after former President Lula took office in early 2003, his government spearheaded the founding of the IBSA Dialogue Forum between Brazil, India and South Africa to coordinate deeper South-South cooperation between these three large and developing nations and expand such cooperation to smaller developing nations in Africa, Asia, Latin America and the Caribbean. President Lula followed up this initiative with successive trips to a growing list of African countries, adding presidential diplomacy to his government's efforts to engage African counterparts through both bilateral and multilateral dialogue and formal agreements for development cooperation.

Aside from IBSA, the Brazilian government engagement intensified through the Community of Portuguese Language Countries (known as the CPLP in Portuguese), established in 1996 to coordinate dialogue and cooperation between the former Portuguese colonies, in particular Brazil and the primarily Portuguese-speaking African countries of Angola, Cape Verde, Guinea-Bissau, Mozambique, and São Tomé and Príncipe. Through the CPLP, Brazil participated in a number of activities across a broad spectrum of issues, mostly with a focus on AIDS-HIV, public health, and education. Through the CPLP and under Brazilian leadership, Brazil's oil and gas regulatory agency, the *Agência Nacional de Petróleo* or ANP, provided technical assistance to São Tomé and Príncipe to develop a regulatory and auction regime for its hydrocarbon reserves. Brazil also intensified cooperative energy-related activities in Angola and Mozambique, including the promotion of biofuel production.

In addition to Brazil's engagement through IBSA and the CPLP, the Brazilian government played an instrumental role in the convocation of the first Africa-South America Summit (AFRAS) in Nigeria in 2006. While the first AFRAS summit was largely symbolic, it did serve

to crystalize Brazil's vision of a deepening South-South dialogue and cooperation between the continents of Africa and South America. Aside from these three multilateral initiatives, the Brazilian government is also active in a number of regional African multilateral forums, including the African Union, the Southern Africa Development Community the Economic Community of West African States, and the New Partnership for Africa's Development, among others. Taken together, the Brazilian government's participation in and occasional leadership of these multilateral organizations and forums serves as a key pillar in its geopolitical strategy to assert Brazil's national interests in the South Atlantic. But this institutional engagement also facilitates and amplifies the horizontal developmental cooperation between Brazilian government agencies and private sector firms with their counterparts in Africa, especially, but not limited to the members of the CPLP. This cooperation has led to increasing international trade between Brazil and a growing list of African countries as well as Brazilian direct foreign investment, including a growing portion in the areas of biofuel production and power generation and distribution.

Since the 1990s the Brazilian government has provided favorable financing through BNDES to Brazilian exporting firms. In 2008 the Brazilian government expanded export-promotion efforts by launching the African Integration Program to stimulate Brazilian exports to Africa through both tax subsidies and financing. Overall, international trade between Brazil and Africa has quickly grown in the past decade from just over \$4 billion in 2000, to nearly \$26 billion by 2008; and Brazil is the only developing country that holds a negative trade balance with Africa overall.⁷ Brazilian direct private investment in Africa has also grown over the past decade to reach an estimated \$10 billion.⁸ This economic interdependence is still modest in comparative perspective, but it does reflect Brazil's strategy of fomenting a deeper structural connection with the African continent that parallels its South-South cooperation strategy. Growing trade and investment coupled with extensive governmental cooperation has created a solid foundation for Brazil to establish significant energy linkages with Africa across the energy matrix.

7. Milhorange (2013:9).

8. *Ibid.*

The Brazilian government has achieved modest success in advancing energy-based linkages that develop through government facilitation, dialogue, formal agreements, technical assistance, financing through BNDES, and the facilitation of private sector investment in a growing list of African countries. For example, the Ministry of Foreign Relations (MRE) counts on its New and Renewable Energy Resources Division (DRN) to develop energy-based cooperation with African nations while the MRE administered Brazilian Agency for Cooperation (ABC) directs programs and projects. In the case of biofuel development, ABC coordinates and administers cross-cutting projects aimed at implanting sugarcane cultivation for ethanol refining in several select African countries. ABC works with Brazil's Agricultural Research and Extension Agency, known as EMBRAPA, to conduct feasibility studies and provide technical assistance to African governments and producers. Currently, EMBRAPA provides much of this assistance through its offices in Ghana and Mozambique.

Once the Brazilian government has developed programs and projects and through cooperative, bilateral agreements with such African countries as Angola, Mozambique and the Sudan, then BNDES provides Brazilian private sector firms and the state-controlled Petrobras with financing through its foreign direct investment credit line. Biofuel production has been and continues to be a focus of this BNDES loan program since its establishment in 2005.⁹ This government facilitation and BNDES financing has led a modest, but growing, list of Brazilian companies to internationalize their operations in Africa, including the state-controlled Petrobras (oil, gas and biofuels) and Eletrobras (electricity) as well as the private firms Odebrecht (construction and infrastructure), Vale (mining), and Dedini (capital goods for sugar/ethanol refining).

Hydrocarbons

Brazil's oil and gas linkages with Africa have weakened since 2013. Petrobras, not long ago a growing player in offshore drilling in Angola, Gabon, and other West African countries through its Atlantic

9. Sergio Schlesinger, "Cooperação e Investimentos Internacionais do Brasil: A Internacionalização do Etanol e do Biodiesel." FASE. 2012.

Project, has sharply cut back its investment in the region. In June 2013, the oil giant's international arm sold half of its shares of exploration and production holdings in six African countries to the finance vehicle BTG Pactual, owned by the São Paulo investor André Esteves, for \$1.525 billion—less than a third of the price it had hoped to sell its Nigerian assets for months earlier.¹⁰ The two companies now co-own a joint venture for exploration and production in Angola, Benin, Gabon, Namibia, Nigeria, and Tanzania. These assets reportedly have a total of 140 million barrels of proven reserves.¹¹ The sale to BTG Pactual and joint venture represent Petrobras' strategy of pulling back from its international investments in order to concentrate investments and new operations in its rapidly expanding Brazilian operations in the pre-salt blocks.

Petrobras' explorations off the coast of West Africa made geologic sense. The continental shelves east of Brazil and West Africa formed together before the continents broke apart. Geologists believe that the same geologic formations that make the pre-salt so promising also exist off the coast of Angola and in the Gulf of Guinea.¹² The work Petrobras had already accomplished on the pre-salt gave it a leg up in developing these blocks as well. But the enormity of the pre-salt has forced the Brazilian company to concentrate its efforts at home. The huge reserves in the pre-salt 300 kilometers off the Brazilian coast are an all but certain path to enormous wealth for the country. Yet many challenges need to be overcome before Petrobras draws any oil from its wells. The ultra-deep wells require new technology to drill through the salt layers and the high seas present stabilization difficulties. Local-content requirements will further postpone yields.¹³ To meet all these

10. Jeb Blount, "UPDATE 2-BTG Pactual Snaps up Petrobras Africa Stake for \$1.53bln." *Reuters*, June 14, 2013, accessed at: <http://www.reuters.com/article/2013/03/27/petrobras-nigeria-idUSL3N0CJ8WC20130327>. According to Blount and Reuters, Petrobras wanted 5 billion dollars for the Nigeria assets alone.

11. Rodrigo Orihuela and Peter Millard, "Petrobras Sees Dutch Tax Advantage for African Operations," *Bloomberg*. September 26, 2013, accessed at: <http://www.bloomberg.com/news/2013-09-25/petrobras-sees-dutch-tax-benefits-for-african-operations.html>.

12. REPSOL, "Gondwana's Oil," accessed at: http://www.repsol.com/es_en/corporacion/prensa/newsletter/petroleo-gondwana.aspx.

13. Mercopress, "Brazil Conditions Any Future Oil Pre-Salt Bidding to Local Industry Capacity to Supply Equipment And Services," December 26, 2013, accessed at: <http://en.mercopress.com/2013/12/26/brazil-conditions-any-future-oil-pre-salt-bidding-to-local-industry-capacity-to-supply-equipment-and-services>.

demands, Petrobras, an experienced deep-water driller, has become overburdened, in terms of both human resource capacity and debt.¹⁴

The fields will take some time to meet the high expectations set by President Lula. Petrobras and its partners currently produce approximately 360,000 barrels per day (bpd) from the pre-salt, much less than originally forecast;¹⁵ the company estimates this production will rise by 2.1 million bpd by 2020.¹⁶ Meanwhile, investors are wringing their hands impatiently. Petrobras stock prices have fallen from a New York Stock Exchange all-time high of \$51.33 on November 27, 2009¹⁷ to a low of \$10.86 on March 14, 2014.¹⁸ As a result, Petrobras has focused its investments and operations closer to home and taken steps to reduce its foreign holdings, including in Africa. In another cost-saving move, Petrobras moved its Africa headquarters in 2013 to the Netherlands, which shares a double-taxation agreement with Brazil. Petrobras will pay a 25% tax rate, significantly lower than it would pay in Brazil, the United States, or another country without such an agreement.¹⁹ Taken together, these efforts demonstrate Petrobras' commitment to explore the pre-salt reserves while also assuaging its disappointed private stockholders who hold a large, but minority stake in this state-controlled company.

Some private Brazilian oil companies, barred from operatorship or a majority stake in pre-salt blocks at home, have availed themselves of

14. See Mark S. Langevin, "The Petrobras Debt Challenge," BrazilWorks Briefing Paper, January 2014, accessed at: <http://www.brazil-works.com/wp-content/uploads/2014/01/The-Petrobras-Debt-Challenge-pages.pdf>.

15. Petrobras, "Operational Highlights: Monthly Crude Oil and Natural Gas Production in Brazil and Abroad," March 6, 2014, accessed at: [http://www.investidorpetrobras.com.br/en/operational-highlights/production/monthly-crude-oil-and-natural-gas-production-in-brazil-and-abroad.htm](http://www.investidorpetrobras.com.br/en/operational-highlights/production/monthly-crude-oil-and-natural-gas-production-in-brazil-and-abroad/monthly-crude-oil-and-natural-gas-production-in-brazil-and-abroad.htm).

16. Petrobras 2013—2017 Business Plan. March 19, 2013:12, accessed at: <http://www.investidorpetrobras.com.br/en/presentations/2013-2017-bp-presentation.htm>.

17. NYSE: November 27, 2009, Petroleo Brasileiro Petrobras SA Stock. Retrieved through Google Finance at: <https://www.google.com/finance?q=NYSE%3APBR&sq=Petrobras&sp=1&ei=8sEoU8DJJs2O6wH4Kg>.

18. NYSE: March 14, 2014, Petroleo Brasileiro Petrobras SA Stock. Retrieved through Google Finance at: <https://www.google.com/finance?q=NYSE%3APBR&sq=Petrobras&sp=1&ei=8sEoU8DJJs2O6wH4Kg>.

19. Rodrigo Orihuela and Peter Millard, "Petrobras Sees Dutch Tax Advantage for African Operations." *Bloomberg*. September 26, 2013, accessed at: <http://www.bloomberg.com/news/2013-09-25/petrobras-sees-dutch-tax-benefits-for-african-operations.html>.

the similar geology of Africa's continental shelf. So far, they have not found success across the Atlantic. In a five month span in 2013, HRT, owned by a former Petrobras geologist, has come up empty in three drilling attempts in Namibia,²⁰ where it owns ten blocks.²¹ (It has had bad luck at home, too.)²² Odebrecht, the Brazilian construction firm, has a minority stake in an offshore Angolan block, where the operator Maersk oil recently has had success. Petra Energia, another Brazilian exploration and production firm, has expressed interest in expanding its business to Africa, but without any report of success.²³

In a rare case of the linkage moving west, from Africa to Brazil, Angola LNG, a partnership between Sonangol and affiliates of Chevron, Total, BP, and ENI delivered 160,000 cubic meters of liquefied natural gas to Rio de Janeiro in July 2013. Brazil, an importer of natural gas, does not demonstrate much interest in gas exploration and production opportunities in West Africa.²⁴

Petrobras might play a bigger role in Africa's petroleum exploration and production in ten years, after it has achieved forecasted production levels in its own pre-salt fields, diminished its debt burden, and satisfied investors with growing revenues that outpace costs. If it does revisit West Africa, it will likely come back with cutting-edge drilling technology that could significantly reduce production costs for such national oil companies as Angola's Sonangol. In the meantime, Petrobras' presence in Africa is dwindling and it is yet to be seen whether Brazil's smaller private firms can flourish at home and invest abroad with success. While Brazil's firms have seen small success offshore, the work of Odebrecht, Vale, and other large firms onshore—in hydropower, biofuels, coal and electricity generation—constitute Brazil's deepest energy linkages across the South Atlantic.

20. "Brazil's HRT: Third Offshore Namibia Oil Well Comes Up Dry," *Wall Street Journal*, September 10, 2013, accessed at: <http://online.wsj.com/article/BT-CO-20130910-703841.html>.

21. "Brazil's HRT Completes Purchase of BP Stake in Offshore Oil Field," *Wall Street Journal*, January 9, 2014, accessed at: <http://online.wsj.com/article/BT-CO-20140109-704492.html>.

22. Chris Cote and Mark S. Langevin, "The Recent Development of Brazil's Private Petroleum Companies," BrazilWorks Briefing Paper. September 2013, accessed at: <http://www.brazil-works.com/wp-content/uploads/2013/10/Brazils-Private-Petroleum-Producers-Final.pdf>.

23. *Ibid.*

24. Angola LNG, "First Angola LNG Cargo Delivered." July 24, 2013, accessed at: <http://www.angolalng.com/Project/FirstAngolaLNGCargoDelivered.htm>.

Vale, the Brazilian mining giant, has extended its reach across southern Africa, with work in Mozambique, Angola, and South Africa, where it has planned to invest \$12 billion from 2011 to 2016, mostly in iron-ore and copper.²⁵ Indeed, Vale is betting big in Mozambique. In Moatize, Mozambique, an area on the Zambezi some 600 kilometers northwest of the port city Beira, Vale has undertaken a major coal project, now entering an expanding second phase. The 2014 annual costs at Moatize constitute more than a quarter of Vale's project execution line on its 2014 budget.²⁶ The company began production there in 2011 and now will invest \$761 million more—production totaled 1.444 million tons of thermal coal for 2013. According to a Vale quarterly report,

The ramp-up of the first phase of the Moatize coal project is being temporarily restricted by the existing limitations of the logistics infrastructure—railway and port—which do not allow for utilization of the mine nominal capacity of 11 million tons per year... The conclusion of the Nacala corridor project will eliminate the above mentioned logistics bottleneck.²⁷

A portion of the mined coal, sufficient for the production of 300 million liters of fuel per month, will remain behind in Moatize where Vale plans to build a coal-to-diesel plant.²⁸ The company expects to sell half in the Mozambique market and use the rest for its own operations. The coal not intended for diesel is being shipped by rail for export to South Asia.²⁹ Vale's productive investment in Mozambique reflects a more traditional, extractive industry based approach to foreign direct investment in Africa. However, the combined infrastructure investments by such Brazilian firms as Vale and Odebrecht,

25. Keith Campbell, "Vale Now Active in Southern, Central, and West Africa." *Mining Weekly*. September 2, 2011, accessed at: <http://www.miningweekly.com/article/brazilian-major-now-active-in-southern-central-and-west-africa-2011-09-02-1>.

26. Keith Campbell, "Vale Announces 2014 Investment Plans for Mozambique." *Mining Weekly*. December 13, 2013, accessed at: <http://www.miningweekly.com/article/global-mining-major-announces-2014-investment-plans-for-mozambique-2013-12-13>.

27. Vale, "Vale 2013 and 4Q13 Production Report," 2013, accessed at: [http://www.vale.com/EN/investors/Quarterly-results-reports/Quarterly results/QuarterlyResults/PREPORT4T13_i.pdf](http://www.vale.com/EN/investors/Quarterly-results-reports/Quarterly%20results/QuarterlyResults/PREPORT4T13_i.pdf).

28. Campbell, "Vale Now Active in Southern, Central, and West Africa."

29. Roberto Magno Iglesias and Katarina Costa, "O investimento direto brasileiro na África," *Textos CINDES*, No. 27, December 2011:20, accessed at: <http://www.iadb.org/intal/intalcdi/pe/2012/09905.pdf>.

including the Nacala airport³⁰ and the Beira port (still in the negotiation phase)³¹ in Mozambique promise to propel development in coming decades. Yet, it may be in biofuels production and electricity generation and transmission that Brazilian energy linkages with Africa best represent the Brazilian government's vision of a South-South cooperation model that delivers up sustainable development in the longer run.

Biofuels

Brazil, a world leader in sugarcane-based ethanol production, envisions a strong biofuel industry as a path to fuel and electricity generation in Africa. The push to create an international biofuels market is centered in Africa, where similarities between West Africa's soil quality and Brazil's fertile *Cerrado* provide a strong starting point for extensive cooperation and shared practices. Transferring training, experience, and technology to its African partners, Brazil is planting the seed for a strong biofuels industry to grow in the near future. Like in the United States, the European Union, and Brazil, many African countries are looking to cut high fuel costs by adding ethanol to the mix. For example, Tanzania currently imports ethanol from Brazil "as one of several ways to cut the cost of gasoline and reduce petroleum consumption."³² Domestic production of biofuels also addresses issues of energy access and rural job opportunities, both major obstacles to development.

Brazil is signatory to several multilateral agreements with the United States and the European Union, which raise Brazil's visibility and increase potential financing. In 2007 the United States and Brazil signed a memorandum of understanding on biofuels cooperation.³³ The second tenet of the agreement stated that, in regard to third countries, "the Participants intend to work jointly to bring the bene-

30. Odebrecht, "An Agreement in Benefit of Mozambique," May 26, 2011, accessed at: <http://www.odebrecht.com/en/press-room/news?id=15777>.

31. *Ibid.*

32. FIESP, Eletrobras and the African Development Bank, "Energy Markets in Africa," 2011:141, accessed at: <http://www.fiesp.com.br/arquivo-download/?id=2463>.

33. Mark S. Langevin, "Energy and Brazil-United States Relations," in Renata de Melo Rosa and Carlos Federico Domínguez Avila, eds., *América Latina no Labirinto Global: Economia, Política e Segurança- Volume 2*. Editora CRV, Curitiba, 2012:99-124.

fits of biofuels to select third countries through feasibility studies and technical assistance aimed at stimulating private sector investment in biofuels.”³⁴ Brazil also joined forces with the European Union in an agreement in 2008 to promote biofuels development in Africa.³⁵ Brazil also participates in biofuels-related technical workshops with India and South Africa.

Brazil extended its biofuels reach in 2008 when it signed an agreement with six countries—Benin, Burkina Faso, the Ivory Coast, Mali, Niger, Senegal, Togo, and Guinea Bissau—through the West African Economic and Monetary Union. Agreements outside of this union are with Angola, Ghana, Mozambique, and Sudan.³⁶

Unlike partnerships in other energy sectors, where private or public-private firms handle the bulk of business, various government ministries will do the heavy lifting for biofuels, at least at the training and technology transfer level. The wide-ranging effort is led by several ministries, including the Ministries of Agriculture, Foreign Affairs, and Mines and Energy. Embrapa, the agricultural and livestock research arm of the Ministry of Agriculture, has opened offices in Ghana and Mozambique since 2008, from which it supplies on the ground technical expertise.³⁷ Additional technical support comes from the Ministry of Foreign Affairs through its administration of *Pró-Renova*, a BNDES-funded mechanism supporting renewable energy development that, as part of its purview, provides training and exchange programs.³⁸ These efforts, like other foreign initiatives, are coordinated through the Brazilian Agency of Cooperation, part of the

34. “Memorandum of Understanding Between the U.S. and Brazil to Advance Cooperation on Biofuels,” U.S. Department of State, March 9, 2007, accessed at: <http://www.state.gov/p/wha/rls/158654.htm>.

35. Ministério de Relações Exteriores (MRE), “Terceira Cúpula Brasi-União Européia—Declaração Conjunta,” October 6, 2009, accessed at: <http://www.itamaraty.gov.br/sala-de-imprensa/notas-a-imprensa/2009/06/terceira-cupula-brasil-uniao-europeia-declaracao>.

36. FIESP, Eletrobras, and the African Development Bank, 2011.

37. For more analysis of Embrapa in Africa and agricultural extension and research cooperation see Lídia Cabral and Alex Shankland, “Narratives of Brazil-Africa Cooperation for Agricultural Development: New Paradigms?” *Future Agricultures*. CBAA Working Paper, March 2013.

38. Isaias Albertin de Moraes and Rodrigues Bessa Mattos, in “Cooperação Brasil—África em Biocombustíveis durante o Governo Lula: Uma Parceria para o Desenvolvimento,” *Revista Conjuntura Austral*, Vol. 3 no. 13, August–September 2012, write in Footnote 7, p. 60, that “In 2009 and 2010, a technical team composed of representatives of the Ministries of Agriculture and Foreign Relations and Embrapa held seminars such as “Agroecological Zoning: Instrument

Ministry of Foreign Affairs, and financed by BNDES, the Brazilian National Development Bank.

Implementation and production are largely left to African governments and the private sector. Odebrecht, the seemingly omnipresent construction and agribusiness giant, announced that it will invest \$220 million, with the Angolan companies Damer and Sonangol, in a \$400 million dollar consortium, Bioenergy Company of Angola, known as BIOCUM, in sugarcane for biofuels production in northern Angola.³⁹ It is the country's largest renewable energy project. Sugar production through BIOCUM is forecast for 225,000 tons in 2014, 15% of which (33,750 tons) will be used for ethanol production.⁴⁰ BIOCUM has projected 30 million liters of ethanol to produce 160,000 megawatt hours of bioelectricity annually.⁴¹ Other Brazilian companies, primarily producers of equipment, also stand to benefit from deepening cooperation. Dedini, a São Paulo-based capital goods manufacturer, sold Sudan the plant it uses to produce 65 million liters of ethanol from sugarcane each year.⁴²

Africa-Brazil biofuel linkages are framed by bilateral and multilateral government agreements that create a nexus of international partnerships that support feedstock cultivation and biofuel production. This nexus has attracted investment and triggered technology transfer, especially in the case of Dedini that hopes to build ethanol refineries throughout Africa, but it is not yet apparent whether sufficient interest and investment is available to significantly expand biofuel production

for public policy planning in the agricultural phase of the sustainable production of biofuels," in Botswana, South Africa, Angola, Zambia, Tanzania, Zimbabwe, and Mozambique. In 2010 there were seminars about "Biofuels Public Policy," in the ECOWAS countries and seminars for "Development and Innovation in the Biofuels Industry," in Kenya, Uganda, Tanzania, Ethiopia, Sudan, and Mozambique."

39. Ministério de Desenvolvimento, Indústria e Comércio Internacional (MDIC), "Oportunidades de Negócios e Investimento em Serviços - Brasil e Angola," 2008:19, accessed at: http://www.mdic.gov.br/arquivos/dwnl_1257766509.pdf.

40. Colin McLelland and Manuel Soque, "Odebrecht-run Biocom seeks Angola Sugar Self-Sufficiency," *Bloomberg*, July 25, 2013, accessed at: <http://www.bloomberg.com/news/2013-07-24/odebrecht-run-biocom-seeks-angola-sugar-self-sufficiency.html>.

41. African Development Bank, "Angola: Perfil do Sector Privado do País," 2012:65, accessed at: <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Evaluation-Reports/Angola%20-%20Private%20Sector%20Country%20Profile%20-%20Portuguese%20Version.pdf>.

42. "KSC introduces biofuel for cars in Sudan for the first time," *Sudan Tribune*, April 19, 2013, accessed at: <http://www.sudantribune.com/spip.php?article46293>.

and consumption relative to hydrocarbon based fuels in the coming decade. The relative success of Brazil in promoting biofuels in Africa depends increasingly on national regulatory frameworks, including mandated transportation blend ratios that invite greater local and foreign direct investment in this emerging production chain.

Electricity Generation and Transmission

Sub-Saharan Africa, where Brazil has the strongest energy linkages, suffers from dismal electrification rates (59.9% in cities and 14.2% in rural areas),⁴³ compounded by an unreliable grid and high costs. 585 million people in sub-Saharan Africa are without electricity. To give an example, the World Bank ranked the quality of Mozambique's electricity supply 111th out of 140 countries.⁴⁴ Blackouts are common. The countries of this region need investment in both electricity generation and transmission. Improving Sub-Saharan Africa's electricity grid has become a popular foreign investment project. The European Union's Alliance for Rural Electrification, the United States' Power Africa, and China's infrastructure investment all aim to bring electricity to rural Africa. And there is certainly the need—Sub-Saharan Africa is the largest and most energy-poor region in the world.

Brazil is active in power generation in Africa, primarily through large private companies participating in the development of hydroelectric dams. Brazil's depth of experience with hydropower makes it a useful participant in transferring knowledge to African construction and operation. Several projects stand out.

- Odebrecht is the most active electricity generation construction from Brazil involved in Africa. It started building the Capanda hydroelectric dam in Angola in 1982 with a planned capacity of 520 MW—the company left because of civil war, but the Brazilian government loaned Angola money to finish the project.⁴⁵

43. International Energy Agency, "Access to Electricity," 2011, accessed at: <http://www.worldenergyoutlook.org/resources/energydevelopment/accesstolectricity/>.

44. World Bank, "Africa Competitiveness Report 2013," 2013:175, accessed at: <http://www.worldbank.org/content/dam/Worldbank/document/Africa/Report/africa-competitiveness-report-2013-main-report-web.pdf>.

45. Gerhard Seibert, "Brazil in Africa: Ambitions and Achievements of an Emerging Regional Power in the Political and Economic Sector," Instituto Universitário de Lisboa, Centro de

Odebrecht is also repairing the four initial turbines of Cambambe Dam on the Kwanza River which have a capacity of 45 MW each. The company will expand the dam, adding four new turbines, to increase total output capacity by 700 MW.⁴⁶ The Laúca Hydroelectric Dam will have a production capacity of 2,067 megawatts, four times larger than the Capanda Dam.⁴⁷ The Gove Dam, in the Huambo region of Angola, will have a production capacity of 60 MW and provide electricity to 3 million inhabitants of Huambo.⁴⁸

- The Brazilian construction firm Camargo Corrêa is constructing the 1500 MW Mphanda-Nkuma hydroelectric dam on the Zambezi River in Mozambique.⁴⁹ It estimates 20% of the electricity will flow into the Mozambique grid.⁵⁰ The Mozambique Electricity Company expects the project to come online in 2018.⁵¹
- Eletrobras, a state-controlled and publicly-traded company, has struggled with overseas activities, but has launched several projects in Africa. In 2012 Eletrobras announced that a 350 MW project in Angola was under review with an initial cost estimate of \$700 million. José da Costa Carvalho Neto, President of Eletrobras, reported that his company would partner with a local company to take on the project, but that planning would take two to five years.⁵² Carvalho Neto also announced a 1,500 MW

Estudos Africanos, p. 10 (publication date not available), accessed at: <http://www.nai.uu.se/ecas-4/panels/1-20/panel-8/Gerhard-Seibert-Full-paper.pdf>.

46. Chris Dalglish, Sharon Jones, and Scott Masson, "Cambambe Dam Project Phase 2: Environmental and Social Due Diligence, Final," Report Prepared by SRK Consulting for HSBC Bank, March 2013:7, accessed at: http://www.miga.org/documents/Cambambe_Dam_ESDD.pdf.

47. Macauhub.com, "Brazilian Company Odebrecht Selected to Build New Hydroelectric Facility in Angola," June 22, 2012, accessed at: <http://www.macauhub.com.mo/en/2012/06/22/brazilian-company-odebrecht-selected-to-build-new-hydroelectric-facility-in-angola/>.

48. Odebrecht, "En Angola, AH de Gove realiza etapa fundamental el proyecto," Odebrecht Noticias, February 2012, accessed at: <http://odebrechtnoticias.com.br/ON4/home?p=5240>.

49. Seibert, *op. cit.*

50. Mphanda Nkuwa, "Enquadramento," accessed at: <http://www.hmnk.co.mz/pt/go/enquadramento-proyecto>.

51. Electricidade de Moçambique E.P., "Executive Exchange on Developing an Ancillary Service Market: Overview of Mozambique Electricity Sector: Opportunities and Challenges," p.12, accessed at: <http://www.usea.org/sites/default/files/event-/Mozambique%20Power%20Sector.pdf>.

52. "Eletrobras estuda construção de usina em Angola—presidente," *Reuters Brasil*, May 3, 2012, accessed at: <http://br.reuters.com/article/topNews/idBRSP8420A820120503?pageNumber=1&virtualBrandChannel=0>.

hydroelectric dam project in northern Mozambique was under consideration.⁵³ Eletrobras is working within a consortium of Chinese and South African companies.⁵⁴

Although hydropower development is an easy choice for electricity generation in river-rich Southern Africa, some areas may be relying too heavily on water for their electricity needs and thereby expose themselves to shortages during droughts. Strengthening (or in some cases creating) regional power grids will help hedge against local energy shortages and issues of intermittent generation or transmission interruptions. Diversification of electricity sources is another useful hedge, but energy-hungry countries will continue to exploit hydropower's larger, more efficient scale and to generate low-carbon electricity as a direct avenue to development.

There are few current Brazilian contributions to Africa's electricity transmission infrastructure. In 2011 Camargo Corrêa built the 200 kilometer Uíge-Maquela do Zombo transmission line, which provides over 250,000 people with electricity.⁵⁵ Initial plans to extend the line are unconfirmed. Eletrobras announced in late 2012 that studies were underway for two new transmission lines. The transmission lines would each run 1,500 kilometers. One would connect to the South African Power Pool, and the other would supply electricity to Mozambicans.⁵⁶ In total, they would carry 1,500 to 2,000 MW of electricity. Eletrobras expects the project to begin in 2015.⁵⁷

53. Vladimir Platonow, "Projeto de internalização da Eletrobras prioriza investimentos na África e na América do Sul," Agência Brasil, April 18, 2012, accessed at: <http://memoria.ebc.com.br/agenciabrasil/noticia/2012-04-18/projeto-de-internacionalizacao-da-eletobras-prioriza-investimentos-na-africa-e-na-america-do-sul>.

54. Ruderico Ferraz Pimentel and Victor Magalhães Feleppa, "Internationalization of a Brazilian State-Owned Power Company: Comments from the Eletrobras Case," Eletrobras, 2013:13, accessed at: http://www4.fsa.ulaval.ca/files/content/sites/fsa/files/sections/La_recherche/chaieres_recherche/Stephen-A.-JARISLOWSKY/ActesHEI/papers/Internationalization%20of%20a%20Brazilian%20state%20owned%20power%20company,%20comments%20from%20the%20electrobras%20case.pdf.

55. MacaHub.com, "Electricity Transmission Line Inaugurated in Angola," June 23, 2011, accessed at: <http://www.macaHub.com.mo/en/2011/06/23/electricity-transmission-line-inaugurated-in-angola/>.

56. Vladimir Platonow, "Projeto de internalização da Eletrobras prioriza investimentos na África e na América do Sul," Agência Brasil, April 18, 2012, accessed at: <http://memoria.ebc.com.br/agenciabrasil/noticia/2012-04-18/projeto-de-internacionalizacao-da-eletobras-prioriza-investimentos-na-africa-e-na-america-do-sul>.

57. André Magnabosco e Luciana Collet, "Eletrobras pode ser parceria da State Grid na África," *Exame*, February 7, 2014, accessed at: <http://exame.abril.com.br/negocios/noticias/eletrobras-pode-ser-parceira-da-state-grid-na-africa-2>.

One way to continue to rely on hydropower but avoid vulnerability to droughts is through an extended regional grid. Brazil has considerable experience in developing regional (multi-country) grids in South America and its know-how could come into use in Africa. A joint report by the African Development Bank, the Federation of São Paulo Industries (FIESP), and Eletrobras, devotes one section to power integration—strengthening the interconnectivity of four regional power pools in Africa.⁵⁸ The report identifies four areas important to successful power integration: legal and regulatory frameworks, planning and operating systems, trade, and capacity building. Eletrobras could use its experience with each of these categories to facilitate a smoother integration in Africa, especially the Southern Power Pool. The countries Brazil operates most heavily in—Angola and Mozambique—are relatively power poor and so stand to benefit from stronger regional integration and a smoother distribution of electricity. The main objectives of the Southern African Power Pool are, according to the report:

- Improve the reliability and security of the existing regional power system;
- Facilitate grid expansion and integration with non-member countries;
- Increase electricity access in rural areas;
- Develop a competitive energy market; and
- Foster a short-term energy market by facilitating trade in surplus power not contracted under existing agreements.⁵⁹

This report serves as a blueprint for deepening power generation and transmission based linkages as well as a formative experience with respect to expanding such cooperative and integrating efforts throughout energy poor Africa. While the plan focuses on international transmission integration, it sets a foundation for further national and international investments in power generation and gives all stakeholders more incentive to work out the distribution related bottlenecks to insure that expanding regional grid integration translates into affordable electricity for millions of African families and

58. FIESP, Eletrobras, and the African Development Bank, 2011:146–169.

59. *Ibid.*, p. 160.

enterprises. This sensible plan holds out the promise of making Brazil's pragmatic approach to its energy linkages in Africa increasingly successful.

An Evolving Approach

Critics have argued that these initiatives and investments, while bringing projects and infrastructure backed by lots of cash, do too little to address governance issues - dooming them to the same failures of past projects. China, a larger financier in Africa than Brazil, is backing development projects with huge sums of money, filling "a void left by the West," but is criticized for perhaps "neglecting issues of governance, fairness, and sustainability."⁶⁰ While not as well-endowed as China, Brazil purportedly brings something different to the table—a commitment to South-South cooperation and development forged through a shared culture and history.

Brazil has a long way to go before it proves to be a different kind of partner in Africa than China and other foreign investors. With the exception of biofuels and power generation and transmission, most energy linkages are resource extraction projects. The other energy projects that have been supported or undertaken by Brazilian firms have supplied electricity to mining projects and left only the surplus for local distribution. Brazil has highlighted the dismal electrification rates as a reason for cooperation, but the Brazilian government and the private sector have yet to tackle this issue through a systematic, region wide effort; either alone or with other partners such as the European Union or United States. Given Brazil's own successful rural electrification program, *Luz para Todos*,⁶¹ one might expect greater Brazilian leadership to spearhead a more intensive approach to rectifying energy poverty in Africa.

60. Yun Sun, "China's Aid to Africa: Monster or Messiah?" Brookings Institution, February 2014, accessed at: <http://www.brookings.edu/research/opinions/2014/02/07-china-aid-to-africa-sun>.

61. See María F. Gómez and Prof. Semida Silveira, "The Brazilian Electrification Program LPT (Light for All) —What Lessons Have Been Learnt?" *Renewable Energy for Development*. Stockholm Environment Institute, Vol. 23, No. 1. 2010:1-2; and Alexandra Niez, "Comparative Study On Rural Electrification Policies In Emerging Economies: Keys to Successful Policies," *International Energy Agency Information Paper*, March 2010:19-33.

If Brazil's legacy in Africa remains confined to creating a foundation for successful biofuels programs in a dozen countries, the continent will be better off for its contribution. Ethanol and biomass have made a useful contribution to the fuel mix in other economies, created rural jobs and, in some cases, provided a cleaner source of electricity.

However, Brazil's engagement with Africa promises more and deeper energy linkages across sectors and countries, especially Sub-Saharan Africa and in particular the Portuguese speaking nations. If indeed Brazil's global leadership and pivotal role in coordinating South Atlantic regional security, rather than exclusive efforts aimed at boosting the profits of many of Brazil's leading firms, depend upon the economic and social success of its neighbors across the South Atlantic, then Brazil will need to devote greater attention and investment to distinguish its role in pushing forward the economic development of Africa.

President Rousseff has reined in the ballooning presence that President Lula sought in Africa. She has decided to focus Brazil's strategy in Africa on high impact projects that demonstrate mutual advantage rather than the sense of debt that her predecessor conveyed.⁶² In other words, Brazil shouldn't be everywhere in Africa, just where its companies can do best. She has emphasized that the finance is for Brazilian companies, not for the projects themselves:

As long as it's extremely advantageous for Brazilian companies, we'll finance them. It's different than financing the project. We finance the companies. And they, with that money, sell their products, produce more here in Brazil. We gain, and they gain too, because they're going to have their infrastructure.⁶³

Stolte places President Rousseff's remarks in commercial perspective:

62. Instituto Lula, "Brazil Wants Cooperation Based on Mutual Advantage and Shared Values, Says Dilma in Africa," June 5, 2013, accessed at: <http://www.institutolula.org/eng/?p=421#.Ux8-ej9dU4o>.

63. Government of Brazil, "Dinheiro para obras no exterior sai do BNDES para empresas e não prejudica ações no País (translated from the original in Portuguese by the authors)." Entrevista com Dilma Rousseff, Portal Brasil, February 18, 2014, accessed at: <http://www.brasil.gov.br/economia-e-emprego/2014/02/dinheiro-para-obras-no-exterior-saem-do-bndes-para-empresas-e-nao-prejudicam-acoes-no-pais-diz-dilma>.

The dynamic growth of African economies despite the global economic and financial crisis has led Brazil to look to the continent as a promising market for its goods and services, especially manufactured or semi-manufactured products, as it can offer “tropicalized technology” to meet the demands of developing countries.⁶⁴

Brazil’s promise to contribute to African development is contingent upon its national interest in supplying growing consumer and industrial markets. Therefore, it is likely that its development cooperation, including many energy linkages, will expand in parallel to increases in trade and investment.

Brazil’s evolution to a more practical and limited approach to its engagement with Africa does not preclude programmatic expansion in the future, but for now Africa-Brazil energy linkages fall short of the more ambitious vision promoted by former President Lula. Lula’s desire to humanize Brazil’s relations with Africa offers a compelling vision that inspires and could eventually play a more profound role in shaping energy linkages and African economic development in the future.⁶⁵ For now, however, President Rousseff and Brazilian policy-makers must contend with slow growth at home and a sluggish global economy that restricts government initiatives and may prove to slow Brazilian private sector activities in Africa. These limits may force Brazil to reach out to North Atlantic partners, primarily the European Union and United States, to amplify the reach of BNDES loans to Africa as well as Brazilian technical assistance on such pressing issues as the challenge of achieving energy security or the promise of biofuels in Africa. Current agreements with these North Atlantic partners do exist, but have yet to deliver noteworthy results. This suggests that a new dialogue between Africa, Brazil and other international partners may be necessary to recast Brazil’s engagement in order to intensify and expand beyond the current set of Africa-Brazil energy linkages.

One way to extend the influence of Brazil’s approach beyond BNDES’ financial capabilities is to add third-party support, where

64. Christina Stolte, “Brazil in Africa: Just Another BRICS Country Seeking Resources?” Chatham House Briefing Paper, November 2012:7.

65. Instituto Lula, “Lula defende investimento brasileiro no África durante seminário em Brasília,” May 22, 2013, accessed at: http://www.institutolula.org/lula-encerra-seminario-sobre-relacoes-brasil-afrika/#.Ux8_-j9dU4o.

developed countries foot more of the bill while Brazil bolsters the project with its technical knowledge and political legitimacy. Agreements with other countries, including the United States and the European Union, are in place but have yet to see major progress. Hence, Brazil's more pragmatic approach to Africa-Brazil cooperation under President Rousseff may lead to rethinking such multilateral efforts if the politics of South Atlantic security and development can be resolved.

The Political Chess of an Atlantic Basin Energy Initiative

The three major players of the Atlantic Basin—the United States, the European Union, and Brazil—are all eager to invest in Africa. Collaboration makes sense. Instead, sour political relations between Brazil and its northern neighbors restrict and undermine cooperation.

For its part, Brazil views the alliance between its North Atlantic neighbors with caution. In August 2013, Brazil's foreign minister Antonio Patriota told the United Nations Security Council,

We are still concerned that NATO may be seeking to establish partnerships outside of its defensive zone, far beyond the North Atlantic, including in regions of peace, democracy, and social inclusion that do not accept the existence within that space of weapons of mass destruction.⁶⁶

Recent revelations of espionage by the United States, the U.S. snub of the 2010 Iran nuclear deal Brazil brokered with Turkey, and the Obama administration's refusal to openly support Brazil's aspiration for a permanent seat on the UN Security Council have all distanced Brazil from the United States.⁶⁷ The Brazilian government's professed need to defend strategic offshore oil reserves and South Atlantic sea lanes has only compounded Brazil's mistrust of the North Atlantic powers. Therefore, any Atlantic basin initiative that promises to work

66. As quoted by Abdenur and Souza Neto (2013:174), *op. cit.*

67. For more on the Brazil-U.S. bilateral relationship see Chris Cote and Mark S. Langevin, "Does Brasilia Matter? A Close Look at Rhetoric and Reality in Washington," BrazilWorks Briefing Paper, Oct. 17, 2013, accessed at: <http://www.brazil-works.com/wp-content/uploads/2013/10/Does-Brasilia-Matter-Oct-17.pdf>.

toward Africa's energy security would necessarily require a formal recognition of Brazilian leadership in the South Atlantic.

On principle, Brazil would embrace many of the goals advanced by an Atlantic Energy Forum, as proposed in "A New Atlantic Community," which would: "(1) facilitate and develop Atlantic Basin energy trade and investment; (2) improve energy efficiency, energy access, environmental protection and corporate social responsibility in Atlantic energy sectors; and (3) draft an Atlantic Charter for Sustainable Energy that defines the terms of joint or coordinated Atlantic Basin action in a broad range of areas." Those proposing such a forum and community also seek to create an "Atlantic Action Alliance for Renewables Deployment and the Reduction of Energy Poverty," and establish a "Cooperative Atlantic Biofuels Initiative."⁶⁸ In many ways Brazil shares such a multilateral approach to advancing sustainable energy security, whether at home or abroad. However, in the current geopolitical climate, Brazil would hesitate to join and ratify another multilateral initiative that does not explicitly recognize its leadership in the South Atlantic.

Certainly a more limited and practical approach to creating an Atlantic Basin energy community, including efforts to reach agreement on international commercial standards and best practices (yet short of creating a governance space), would invite Brazil's active participation without limiting its independent path with respect to its engagement with Africa and existing energy linkages. If Brazil obtains measurable success in boosting African economic development through energy-related cooperation in the coming decade, then it is more likely to engage and even lead a more formal Atlantic Basin-based multilateral energy initiative thereafter. However, if Brazil's contribution to African development and energy security remain modest—falling short of the tall dreams of past leaders—Brazil would resist accepting a secondary role in a new joint effort, leaving an Atlantic Basin energy community without one of its strongest potential members.

68. Atlantic Basin Initiative, *A New Atlantic Community: Generating Growth, Human Development and Security in the Atlantic Hemisphere*, Center for Transatlantic Relations, Johns Hopkins University, February 2014, accessed at: <http://transatlantic.sais-jhu.edu/events/2014/Atlantic%20Basin%20Initiative%20White%20Paper.pdf>.

