

Report by the Office of the United States Trade Representative on Trade-Related Barriers to the Export of Greenhouse Gas Intensity Reducing Technologies



Office of the United States Trade Representative
Executive Office of the President



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I. Executive Summary

The Energy Policy Act of 2005 calls on the Administration to integrate into U.S. foreign policy the goal of reducing greenhouse gas (GHG) emissions in developing countries. This report, prepared by the Office of the United States Trade Representative (USTR), identifies trade barriers that U.S. exporters of greenhouse gas intensity reducing technologies (GHGIRTs) face in the top 25 GHG emitting developing countries.¹ This report also describes the steps the United States is taking to reduce these and other barriers to trade in GHGIRT products and services and create new market opportunities for U.S. technology workers and companies.

Researchers have found that “[c]ountries which trade more environmental goods have less pollution or consume energy more efficiently.”² As identified in this report, high tariffs and other trade and investment barriers in developing countries impede access to these important technologies. By reducing the prices of these technologies through substantial reduction or elimination of import tariffs and specific non-tariff barriers, developing countries can take concrete and effective action to improve access to products vital for combating pollution, reducing GHG emissions and meeting sustainable development goals.

While many developed countries impose low or no tariffs on many of these environmental technologies, a majority of developing countries covered by this report apply significant import duties, as high as 35 percent *ad valorem* on some products. In addition to tariffs, this report identifies other barriers that can slow the adoption and importation of GHGIRTs, including: lack of adequate and effective intellectual property rights (IPR) protection; lack of regulatory transparency and sound legal infrastructure; state-controlled oil and energy sectors, which are often slower to invest in new technologies; cumbersome and unpredictable customs procedures; corruption; import licensing schemes; and investment restrictions, including requirements to partner with domestic firms.

The United States has been a lead advocate for reducing barriers to trade in GHGIRTs as part of the Administration’s broader effort to open markets around the globe through the ongoing Doha Round of multilateral trade negotiations in the World Trade Organization (WTO). The United States has proposed that WTO Members eliminate tariffs on environmental goods, including GHGIRTs, and address non-tariff barriers to these important technologies.

The United States has pursued a wide variety of other trade and investment initiatives to encourage developing countries to embrace the market-based economic reforms, transparent regulatory practices, intellectual property and investor protections, and open trade regimes necessary to encourage widespread dissemination and use of GHGIRTs. These initiatives include working to secure concrete market-opening commitments from developing countries seeking to join the WTO, entering into trade and investment framework agreements (TIFAs) with countries seeking to improve their trade and investment climates, negotiating bilateral

¹ These countries have been identified by the Department of State’s 2006 “Report to Congress on Developing Country Emissions of Greenhouse Gases and Climate Change Technology Deployment.”

² Bijit Bora and Robert Teh, WTO Secretariat, “Tariffs and Trade in Environmental Goods,” WTO workshop on environmental goods, Geneva, Switzerland, October 11, 2004. Available on the WTO website at http://www.wto.org/english/tratop_e/envir_e/wksp_goods_oct04_e/wksp_goods_oct04_e.htm#programme.

investment treaties that establish a more secure and predictable legal framework for U.S. investors abroad, entering into comprehensive, state-of-the-art bilateral and regional free trade agreements with select countries, and vigorously enforcing U.S. rights under existing trade agreements.

The United States is making tangible progress on addressing many of the principal trade and investment obstacles that U.S. GHGIRT exporters face in developing countries. The Administration's bilateral, regional and multilateral market-opening efforts thereby reinforce the commitment made by G-8 Leaders at the Sea Island Summit to promote innovation, energy efficiency and conservation; improve policy, regulatory and financing frameworks; and accelerate deployment of cleaner technologies, particularly GHGIRTs.

The Administration is committed to working with and consulting Congress and the American people at every step of its trade agenda. Close bipartisan consultation with Congress and Trade Advisory Committees, and more informally with companies and industries that produce and trade in GHGIRTs, is vital to accomplishing the Administration's ambitious negotiating goals. By opening new markets to U.S. environmental goods and services while vigorously enforcing U.S. trade laws and rights related to these important technologies, the United States is working to create real opportunities to reduce greenhouse gas emissions on a global scale.

II. Introduction

“America and the world share this common goal: we must foster economic growth in ways that protect our environment. We must encourage growth that will provide a better life for citizens, while protecting the land, the water, and the air that sustain life ... To clean the air, and to address climate change, we need to recognize that economic growth and environmental protection go hand in hand. Affluent societies are the ones that demand, and can therefore afford, the most environmental protection. Prosperity is what allows us to commit more and more resources to environmental protection.” President George W. Bush, February 14, 2002

The United States continues to lead the world in funding climate-related science and technology, investing approximately \$5 billion annually. The Administration has committed more than \$29 billion for climate change related activities since 2001. The President’s 2007 Budget includes an additional \$6.5 billion for climate change related activities – an increase of 12 percent from the previous year. U.S. efforts are advancing the development and deployment of a broad range of key technologies, including in the areas of renewable energy and air pollution control.

For more than a decade, the United States has made significant progress in reducing greenhouse gas (GHG) emissions intensity. GHG emissions intensity – emissions per unit of economic activity – is a central metric for assessing progress in addressing climate change. An emissions intensity approach ensures a focus on measures that mitigate emissions while fostering economic growth. Intensity-based measures encourage economically valuable activities that do not result in large emissions of greenhouse gases. Further, an intensity-based approach does not reward economic decline as a way of cutting emissions, nor does it reward the movement, or “leakage,” of energy-intensive activities from one country to another. For these reasons, the United States regards GHG emissions intensity as a metric that is particularly relevant for developing countries seeking to grow their economies along a cleaner path.

The Energy Policy Act of 2005 (Public Law 109-58) calls on the Administration to integrate into U.S. foreign policy the goal of reducing GHG intensity in developing countries. Section 1611 of the Act amends the Global Environmental Protection Assistance Act of 1989 (Public Law 101-240) to add new Sections 731-39. Section 732(a)(2)(A) directs the Department of State to identify the top 25 GHG emitting developing countries for the purpose of promoting climate change technology. The Secretary of State has submitted its report to Congress identifying these 25 countries. Section 734 calls on the United States Trade Representative “(as appropriate and consistent with applicable bilateral, regional, and mutual trade agreements) [to] (1) identify trade-relations barriers maintained by foreign countries to the export of greenhouse gas intensity reducing technologies and practices from the United States to the developing countries identified in the report submitted under section 732(a)(2)(A); and (2) negotiate with foreign countries for the removal of those barriers.” This report seeks to identify trade barriers that U.S. exporters of greenhouse gas intensity reducing technologies (GHGIRTs) face in these 25 developing countries, and discuss negotiating fora where these barriers can be addressed. The developing countries identified by the State Department in its report, ranked in order of GHG emissions intensity, are:

1. China
2. India
3. South Africa
4. Mexico
5. Brazil
6. Indonesia
7. Thailand
8. Kazakhstan
9. Malaysia
10. Egypt
11. Argentina
12. Venezuela
13. Uzbekistan
14. Pakistan
15. Nigeria
16. Algeria
17. Philippines
18. Iraq
19. Vietnam
20. Colombia
21. Chile
22. Libya
23. Turkmenistan
24. Bangladesh
25. Azerbaijan

While this report focuses on trade barriers to U.S. exports of GHGIRTs and our efforts to address them, a broader review of U.S. Government activities advancing climate-related technologies can be found in the Department of State's report (referred to above), including the President's Asia Pacific Partnership on Clean Development and Climate (APP), an innovative new public-private effort to accelerate the development and deployment of cleaner, more efficient energy technologies. The APP, which includes two of the developing countries identified in this report, China and India, is moving forward with a robust set of action plans to improve energy security, facilitate economic growth and reduce greenhouse gas emissions. The United States also views the APP as a vehicle to promote increased market access for environmental technologies and related services.

In the absence of a comprehensive, universally-agreed definition of GHGIRTs, USTR has focused in preparing this report on barriers to U.S. exports of renewable energy and air pollution control technologies. Specifically, this report encompasses those renewable energy and air pollution control technologies identified by the United States as "environmental goods" for purposes of negotiating the reduction/elimination of tariff and non-tariff barriers in the WTO.³ A list of these products can be found in Annex I to this report (see Page 31). U.S. exports of these products totaled more than \$18 billion in 2005.⁴

This report is organized into three main sections. Section III of this report discusses some of the background information available on global trade and GHG intensity. Section IV of this report identifies trade barriers to U.S. exports of these GHGIRTs in the top 25 GHG emitting developing countries. Section V of this report discusses the various trade negotiations and agreements that have been completed, or are ongoing, in which the United States is working to reduce and eliminate these barriers.

³ The United States proposed an initial list of environmental goods for tariff reduction/elimination to the WTO in June 2005, TN/TE/W/52. The complete list can be found on USTR's website, www.ustr.gov. This list of products is under review and negotiation; it could change. USTR will report on any updates to the list of products in subsequent reports.

⁴ Based on data provided by the U.S. Department of Commerce and product coverage contained in Annex I.

III. Background: Global Trade and Greenhouse Gas Intensity

The increased use of state-of-the-art environmental technologies represents one of the premier opportunities for the reduction of GHG intensity across the globe. While such technologies are often employed on a large scale in developed countries, developing countries often fall short of utilizing the newest, most efficient environmental technologies available.

In 2000, the United Nations Environment Program (UNEP) and the World Meteorological Organization's (WMO) Intergovernmental Panel on Climate Change (IPCC) produced the following possible explanations as to why developing countries have fallen short in terms of adopting the most environmentally effective and efficient technologies:

- Poor macroeconomic conditions, which include an underdeveloped financial sector, trade barriers (high tariffs and/or quantity controls), high or uncertain inflation or interest rates, uncertain stability of tax and tariff policies, investment risk;
- Lack of data, information, knowledge, and awareness regarding the availability, characteristics, costs, and benefits of environmentally sound technologies (ESTs), especially in the case of “emerging” technologies;
- Lack of markets for ESTs because of little confidence in economic or technical viability;
- High transaction costs of obtaining information and negotiating, contracting, and enforcing contracts;
- Insufficient human and institutional capabilities;
- Lack of supporting legal institutions and frameworks, including codes and standards for the evaluation and implementation of ESTs; and
- Low, often subsidized, conventional energy prices that result in disincentives to adopt energy-saving measures and renewable energy technologies.⁵

In response to these obstacles, the IPCC has encouraged governments to pursue certain policy objectives, including the following:

- Enact measures, including regulations, taxes, codes, standards, and the removal of subsidies, to internalize the full environmental and social costs and reduce unfair commercial risks;
- Reform legal systems, as insecure property rights and uncertain, slow and expensive enforcement of contracts by national courts or international arbitration can discourage investment;

⁵ UNEP/WMO Intergovernmental Panel on Climate Change. “Climate Change 2001: Working Group III: Mitigation.” “10.3.3.2.1 International Technology Transfer Policy.” http://grida.se/climate/ipcc_tar/wg3/422.htm. (This is a partial listing. For the complete list, see website.)

- Promote intellectual property-based industries by providing strong protections for intellectual property rights;
- Encourage financial reforms, competitive national capital markets, transparent investment policies, and international capital flows that support foreign direct investment (FDI). Governments can expand financial lending for ESTs through regulation that allows the design of specialized credit instruments, capital pools and energy service companies;
- Simplify and increase transparency of program and project approval procedures and public procurement requirements;
- Promote competitive markets and open trade policies.⁶

In a 2004 paper, Roger Bate and David Montgomery also seek to uncover the political and economic reasons why developing countries often fall short of reaching their economic and environmental goals.⁷ Bate and Montgomery's research reveals that capital investments in China, India and other developing countries seldom incorporate optimal emissions reducing technologies. The study attributes this cycle of reduced efficiency and growth to non-optimal energy use, lack of economic freedom, and market distortions, including trade barriers and other protectionist measures. By adopting the policies proposed by the IPCC, and thereby reducing many of the trade barriers that currently exist, developing countries will have greater access to GHGIRTs.

Open and transparent trade and investment policies facilitate the importation and adoption of GHGIRTs. Economic development and the implementation of sound environmental policies are legitimate objectives for developing countries and can be pursued in a mutually supportive manner.

⁶ Ibid. (This is a partial listing. For complete list, see website: http://grida.se/climate/ipcc_tar/wg3/422.htm.)

⁷ Bate, R. and Montgomery, W.D., 2004. *Beyond Kyoto: Real Solutions to Greenhouse Emissions from Developing Countries*, American Enterprise Institute for Public Policy Research, 2004.

IV. Identification of Trade Barriers by Country

USTR based the analysis and structure of this report on information contained in the Department of State's 2006 "Report to Congress on Developing Country Emissions of Greenhouse Gases and Climate Change Technology Deployment." In addition, USTR drew heavily from the 2006 National Trade Estimate (NTE) Report on Foreign Trade Barriers.⁸ The 2006 Trade Policy Agenda and 2005 Annual Report of the President of the United States on the Trade Agreements Program were also important resources in the preparation of this report.⁹ Other resources used in the preparation of this report include: USTR publications, press releases and fact sheets; WTO Trade Policy Reviews and other publications; fact sheets and publications from the Department of State; official documents from the White House Council on Environmental Quality; and the 2006 CIA World Fact Book.

China

While China has made significant progress in liberalizing its economy and reducing trade barriers, much work remains to be done. China's accession to the WTO in December 2001 represents a major milestone in the country's economic development. While China continues to implement the economic reforms it began in the 1980s and its WTO commitments, further advances in these reforms would do a great deal to improve market access for U.S. companies. As of 2006, public sector production represented nearly 40 percent of GDP, evidence of the state's wide reach into the country's economic affairs. Local content requirements and other unfair competitive practices are primary hurdles to foreign investments, particularly in capital goods such as GHGIRTs that have somewhat expensive implementation costs. In a country like China, however, where production is highly energy-intensive, the early costs of such technologies can prove economical very quickly.

A level playing field involves many factors, but one of the most critical to the development of and access to GHGIRTs is the extent to which countries protect physical and intellectual property rights. Although China has taken steps to improve its intellectual property laws and related measures, gaps remain. Enforcement of IPR is inadequate. U.S. producers of GHGIRTs reasonably demand that they be fairly compensated for their research, development and production efforts. U.S. companies doing business in China, however, have found that the Government has exploited technology transfer on various occasions, and has at times seized technologies which are then passed on to state-owned and other Chinese-origin firms.

Because it is only through investment in product development that new GHGIRTs are created, it is important that China take concrete steps to protect intellectual property rights. The United States and China have been working to address this important issue. At the Joint Commission on Commerce and Trade (JCCT) meeting in April 2004, leaders from the two countries established an "action plan" to fight IPR infringement and continue to meet regularly to discuss IPR issues.

⁸ The 2006 National Trade Estimate Report on Foreign Trade Barriers, prepared by USTR, was issued in March 2006. The 2006 NTE Report can be found at www.ustr.gov.

⁹ The 2006 Trade Policy Agenda and 2005 Annual Report of the President of the United States on the Trade Agreements Program was issued in March 2006. The 2006 Annual Report can be found at www.ustr.gov.

Another cross-cutting barrier to exports of GHGIRTs is lack of transparency. U.S. firms have experienced difficulty in overcoming the Chinese government's general lack of transparency regarding economic and environmental affairs. The opacity with which the government functions renders the collection and analysis of environmental data difficult for private sector corporations. Moreover, confusion between national and local authorities in implementing environmental regulations also undermines imports of environmental goods into China. Without the ability to accurately determine China's environmental needs and threats, producers of GHGIRTs are unable to respond to such demands and challenges in the most efficient and environmentally sound manner. China's lack of transparency extends to the product licensing and standards development process as well. U.S. companies are subject to an inconsistent and slow approval system for their goods and services.

Key Trade Barriers:

- Unfair competitive practices.
- Lack of government transparency.
- Tariffs:¹⁰ China's approximate average applied tariff on GHGIRTs is 9 percent. China's maximum average bound tariff rate on GHGIRTs is 35 percent.¹¹
- Lack of adequate and effective protection for IPR: China is listed on USTR's Special 301 Priority Watch List.¹²

India

With India's emergence as one of the world's leading developing countries, it is increasingly important that India continue the economic liberalization it has begun in recent years, and that it allow for the increased adoption and importation of GHGIRTs. However, extensive government intervention (a legacy of India's earlier planned economy), lack of transparency and high tariffs represent significant trade barriers to U.S. companies seeking to conduct business in India. While foreign investor confidence in India has improved in recent years, FDI remains quite low, at only 0.7 percent of GDP.

As with China, two of the key barriers to the export of GHGIRTs are lack of IPR protection and transparency. India's large, nontransparent and often inefficient bureaucracy makes patent registration difficult. Enforcement of intellectual property law is also a problem. Government procedures create regulatory bottlenecks, which can slow the movement of GHGIRTs to market. Many of India's entrenched state-owned enterprises also slow the import of new technology by

¹⁰ Applied tariffs reflect the actual tariff rates charged by a country at its border. Bound tariff rates reflect the maximum ceiling rate that a WTO Member country is permitted to charge for a particular product, according to its WTO commitments. A WTO Member may increase its applied tariff rate on a particular product no higher than its bound tariff commitment. Non-WTO Members have no commitments to "bind" their tariffs and can change them at any time.

¹¹ Source: Individual Country Data Submissions to WTO, 2005.

¹² USTR has created a "Priority Watch List" and "Watch List" under Special 301 provisions. Placement of a trading partner on the Priority Watch List or Watch List indicates that particular problems exist in that country with respect to IPR protection, enforcement, or market access for persons relying on intellectual property. Countries placed on the Priority Watch List are the focus of increased bilateral attention concerning the problem areas.

advocating for protection from foreign competition. India maintains relatively high tariffs on GHGIRTs. Moreover, India's tariff structure, which contains relatively high rates on petrochemicals, automobiles and finished steel products, often serves to limit U.S. investment and to favor domestic companies. In recognition of these barriers and the slow pace of investment, initiatives such as the U.S. - India Trade Policy Forum seek to establish a forum to discuss these barriers and address them.

Key Trade Barriers:

- Large, nontransparent government bureaucracy.
- Tariffs: India's approximate average applied tariff on GHGIRTs is 15 percent. India's maximum average bound tariff on GHGIRTs is 40 percent.¹³
- Lack of adequate and effective protection for IPR: India is listed on USTR's Special 301 Priority Watch List.

South Africa

While South Africa's business climate is generally considered to be sound, certain aspects of the country's economy have not been reformed during recent liberalization efforts. Across industries, foreign investment is restricted by relatively high start-up costs, restrictive labor codes, insufficient infrastructure, and regulatory constraints. Such barriers are evident in the energy and transportation sectors, which the South African government directly owns or controls. This situation tends to inhibit foreign investment and to overlook the importance of innovative technologies, such as GHGIRTs. These barriers have generally slowed the uptake of GHGIRTs in South Africa. As noted earlier, state-controlled firms are generally slower to adopt and invest in new technologies. The United States is working to reduce these and other trade barriers through bilateral discussions and the ongoing Free Trade Agreement (FTA) negotiations with the Southern African Customs Union (SACU), but unfortunately, progress in the negotiations has been slow.

Key Trade Barriers:

- General barriers to foreign investment, including inadequate infrastructure.
- State-owned and state-controlled energy and transportation sectors.
- Tariffs: South Africa's approximate average applied tariff on GHGIRTs is 3 percent. South Africa's maximum average bound tariff on GHGIRTs is 25 percent.¹⁴

Mexico

Trade barriers between Mexico and the United States are generally low as a result of the operation of the North American Free Trade Agreement (NAFTA), and U.S. exports of GHGIRTs to Mexico have more than doubled since the implementation of NAFTA, from \$987 million in 1994 to more than \$2 billion in 2005.¹⁵ However, there continue to be certain aspects of Mexican trade policy that slow the adoption of GHGIRTs. One key factor is the protection

¹³ Source: Individual Country Data Submissions to WTO, 2005.

¹⁴ Source: Individual Country Data Submissions to WTO, 2005.

¹⁵ Source: U.S. International Trade Commission Dataweb.

that Mexico affords its state-owned oil company, Petróleos Mexicanos (PEMEX). The Mexican Constitution provides for state ownership of hydrocarbon resources, and the effects of this regulation go so far as to restrict ownership of petrol stations to Mexican nationals. More importantly, with the exceptions of liquefied natural gas (LNG) storage and re-gasification and the marketing of petroleum products, the sector is largely closed to foreign investment. State-owned firms are generally slower to adopt and invest in new technologies. Due to the amount of energy consumed in petroleum extraction and refining, and the great potential for the reduction of GHG intensity in the sector, increased adoption of GHGIRTs could have a particularly significant impact on Mexico's GHG intensity. Inadequate intellectual property protection is another barrier that inhibits Mexico's adoption of innovative technologies.

Key Trade Barriers:

- Highly protected, state-owned energy sector.
- Weak IPR protection: Mexico is listed on USTR's Special 301 Watch List.

Brazil

Despite a strong commitment to economic liberalization and environmental protection, Brazil continues to maintain certain barriers to trade and investment that have limited the import of GHGIRTs from the United States. Not only does Brazil's participation in MERCOSUR (the Spanish name for the Common Market of the South)¹⁶ result in a high common external tariff (CET), but the country also imposes limitations on foreign capital participation in procurement bids. In Brazil, where the state-owned oil and energy companies (Petrobras and Electrobras, respectively) wield significant economic power, limitations on foreign participation slow the importation and adoption of GHGIRTs. Lack of adequate and effective protection for IPR and a cumbersome trade documentation system are further barriers to the widespread use of such important environmental technologies.

To address these and other barriers, the United States and Brazil held an important meeting on trade relations in September 2004, within the context of the Bilateral Consultative Mechanism, in which leaders from both countries were able to address IPR concerns, WTO negotiations, and other issues regarding fair and open trade. USTR continues to work closely with Brazil as a member of the "G-6" to get the WTO negotiations back on track and focused on real market access improvements.

Key Trade Barriers:

- Large state-owned oil and energy sectors.
- Cumbersome trade documentation system.
- Tariffs: Brazil's approximate average applied tariff on GHGIRTs is 14 percent. Brazil's maximum average bound tariff on GHGIRTs is 35 percent.¹⁷
- Lack of adequate and effective protection for IPR: Brazil is listed on USTR's Special 301 Priority Watch List.

¹⁶ Member states of MERCOSUR are: Brazil, Argentina, Uruguay, and Paraguay. Associate states are: Bolivia, Chile, Colombia, Ecuador, and Peru. Venezuela is currently in the admission process.

¹⁷ Source: Individual Country Data Submissions to WTO, 2005.

Indonesia

Indonesia has recently emerged from the politically repressive and economically difficult years of the Suharto regime and has made great progress in opening its markets. Such a transition is no easy task, and Indonesia's business climate is somewhat less welcoming as a result. Corruption is widespread, the rule of law is weak, and state- and military-owned businesses exert excessive influence on the economy. For example, state-owned Pertamina effectively exercises control over all materials used in the oil and gas sectors. And, as noted earlier, state-controlled firms are generally slower to adopt and invest in new technologies, including GHGIRTs.

Unpredictable regulatory guidelines and inconsistent legal enforcement also undermine successful business operations and environmental protection efforts in Indonesia. Regional levies, referred to as "retributions," and taxes are often discriminatory, and the persistence of such measures undermines declared national efforts towards equal treatment of firms. In addition, poor enforcement of intellectual property laws has slowed the adoption of cutting-edge GHGIRTs, although there has been some improvement. To help address these and other barriers, the United States and Indonesia established a Trade and Investment Framework Agreement (TIFA).

Key Trade Barriers:

- Corruption.
- Inadequate and inconsistent enforcement of environmental and other laws.
- Excessive state intervention in the market.
- Discriminatory taxation.
- Tariffs: Indonesia's approximate average applied tariff on GHGIRTs is 6 percent. Indonesia's maximum average bound tariff on GHGIRTs is 40 percent.¹⁸
- Lack of adequate and effective protection for IPR: Indonesia is listed on USTR's Special 301 Priority Watch List.

Thailand

Thailand has made significant progress in lowering trade barriers, but trade liberalization in the country has proven slow overall. Key remaining barriers include weak intellectual property protection, burdensome import licensing procedures, and various incentives to "Buy Thai" in government procurement. In addition, privatization of state-owned enterprises, including those in the petroleum, natural gas, and electricity industries, has fallen behind schedule. These barriers have slowed Thailand's adoption and importation of GHGIRTs.

In an effort to eliminate these and other barriers, the United States and Thailand launched negotiations for a Free Trade Agreement in June 2004. Negotiations are ongoing to improve intellectual property and investment protections, eliminate tariffs, and facilitate trade in services between the United States and Thailand.

¹⁸ Source: Individual Country Data Submissions to WTO, 2005.

Key Trade Barriers:

- Slow trade liberalization and privatization.
- Tariffs: Thailand's approximate average applied tariff on GHGIRTs is 7 percent. Thailand's maximum average bound tariff on GHGIRTs is 30 percent.¹⁹
- Weak IPR protection: Thailand is listed on USTR's Special 301 Watch List.

Kazakhstan

Kazakhstan's business climate presents many challenges to the import of GHGIRTs from the United States. Barriers include high tariffs, a murky tax system and opaque standards and accreditation procedures. In addition, many laws are set up to protect national industries. In particular, protectionist and preferential treatment of KazMunayGas, the national oil company, is a barrier to foreign investment and the import of GHGIRTs. As noted earlier, state-controlled firms are generally slower to adopt and invest in new technologies. Reports of breach of contract by entities of the Kazakh State, as well as judicial corruption, further contribute to slow adaptation of GHGIRTs in this strategic, oil-producing country. In recent years, Kazakhstan has made progress through its partnership in the U.S.-Central Asian TIFA, and continues to advance in its accession to the WTO. The United States is an active supporter of Kazakhstan's bid to join the WTO. However, much remains to be done to open Kazakhstan's market and ensure a level playing field for U.S. exporters.

Key Trade Barriers:

- Lack of transparency.
- Excessive state intervention in the market, particularly in the oil and gas sector.
- Weak rule of law and corruption.
- Tariffs: Kazakhstan's approximate average applied tariff on GHGIRTs is 4 percent. Since Kazakhstan is not yet a WTO Member, it has not formally committed to bind its tariffs and could raise them at any time.

Malaysia

While Malaysia's economy has grown rapidly in recent years largely due to more open trade and investment policies, certain industries, particularly the automotive sector, continue to receive favorable domestic treatment. The Economist Intelligence Unit reports that Malaysia "...uses import licenses (and export controls) to ensure adherence to safety, environmental-protection and copyright requirements, but it also often uses them to protect domestic producers. This policy seeks to ensure adequate supply of essential raw materials and yet provide temporary protection to infant and strategic industries...." In addition, high tariffs, lack of transparency, and inconsistent protection of IPR have also been identified as barriers to the adoption of GHGIRTs. USTR is working to eliminate these and other trade barriers through FTA negotiations.

¹⁹ Source: Individual Country Data Submissions to WTO, 2005.

Key Trade Barriers:

- Lack of transparency and consistent enforcement of laws and regulations.
- Import licensing.
- Tariffs: Malaysia's approximate average applied tariff on GHGIRTs is 7 percent. Malaysia's maximum average bound tariff on GHGIRTs is 30 percent.²⁰
- Weak IPR protection: Malaysia is listed on USTR's Special 301 Watch List.

Egypt

While Egypt's economy has suffered from opaque and overly-restrictive policies, recent economic and political liberalization has helped to foster development. However, barriers still remain, including high tariffs, lack of transparency and inadequate and ineffective protection for IPR. Regulations such as one requiring foreign companies to establish joint-ventures with the Egyptian state-owned petroleum company for oil and gas exploration represent additional barriers to foreign investment. Moreover, the slowing of Egypt's privatization program has left many investors skeptical of the government's interest in further economic liberalization. In the area of intellectual property, enforcement of intellectual property laws remains inadequate. These barriers have slowed the adoption of GHGIRTs in Egypt. To address these barriers, among others, and create a forum for dialogue, the United States and Egypt signed a TIFA in 2002, which has helped to improve transparency and IPR protection in Egypt.

Key Trade Barriers:

- Lack of transparency.
- Joint venture requirements.
- Tariffs: Egypt's approximate average applied tariff on GHGIRTs is 7 percent. Egypt's maximum average bound tariff on GHGIRTs is 60 percent.²¹
- Lack of adequate and effective protection for IPR: Egypt is listed on USTR's Special 301 Priority Watch List.

Argentina

The most notable trade barriers to the import of GHGIRTs in Argentina arise from the general inefficiencies and inconsistencies in trade procedures, and a lack of adequate and effective IPR protection. Opaque regulations and slow customs procedures create barriers to the importation of GHGIRTs. As a party to MERCOSUR, Argentina also applies a high common external tariff. In addition, Argentina lacks adequate IPR protection and effective enforcement, particularly in the area of patents and copyright; a key barrier to its advancement in adopting innovative technologies may be linked to its inadequate patent application system. Argentina has taken recent steps to improve the processing of patent applications, however. To address these barriers

²⁰ Source: Individual Country Data Submissions WTO, 2005.

²¹ Source: Individual Country Data Submissions WTO, 2005.

and other bilateral trade concerns, the United States and Argentina established a Bilateral Committee on Trade and Investment in April 2002.

Key Trade Barriers:

- Inconsistently applied and opaque regulations.
- Slow customs procedures.
- Tariffs: Argentina's approximate average applied tariff on GHGIRTs is 6 percent. Argentina's maximum average bound tariff rate on GHGIRTs is 35 percent.²²
- Lack of adequate and effective protection for IPR: Argentina is listed on USTR's Special 301 Priority Watch List.

Venezuela

Strong anti-American and anti-capitalist rhetoric and policies have created an increasingly uncertain legal and business environment for U.S. companies seeking to conduct business in Venezuela. While the United States continues to be a leading export market for Venezuelan goods (namely, petroleum), the current government's policy of "new socialism" has created many barriers to free trade, and has reduced the likelihood of expanding U.S. exports of GHGIRTs to Venezuela. High tariffs and preferential treatment of domestic firms have slowed adoption and importation of GHGIRTs. Moreover, the giant state-owned petroleum company, Petróleos de Venezuela (PDVSA), continues to restrict competition in this sector, and has been widely accused of failing to employ the most efficient extraction practices and advanced environmental technologies. And, as noted earlier, state-controlled firms are generally slower to adopt and invest in new technologies. In addition, Venezuela's IPR regime requires significant strengthening in order to create a hospitable environment for the adoption of GHGIRTs. While Venezuela represents a potential market for the import and adoption of GHGIRTs, the current political and economic situation has made it more difficult for the United States to address these and other barriers.

Key Trade Barriers:

- Excessive state intervention in the market, particularly the petroleum sector.
- International tensions and lack of investor confidence.
- Tariffs: Venezuela's approximate average applied tariff on GHGIRTs is 12 percent. Venezuela's maximum average bound tariff on GHGIRTs is 37 percent.²³
- Lack of adequate and effective protection for IPR: Venezuela is listed on USTR's Special 301 Priority Watch List.

²² Source: Individual Country Data Submissions to WTO, 2005.

²³ Source: Individual Country Data Submissions to WTO, 2005.

Uzbekistan

The legacy of the Soviet Union continues to impede the development of a fully fair and transparent economic and political system in Uzbekistan. The country continues to follow a misguided policy of extensive government intervention and protectionism in the market and lacks adequate protections for IPR. Uzbekistan continues to charge high tariffs on many GHGIRTs, maintain extensive licensing requirements, restrict access to local currency, and provide insufficient contract protections. Such concerns, together with the lack of an independent judiciary and adequate and effective intellectual property rights protection, are barriers to the import and adoption of GHGIRTs in Uzbekistan. However, Uzbekistan has exhibited a desire to become more fully integrated into the global economy and is currently negotiating its accession to the WTO.

Key Trade Barriers:

- Restricted currency access, including difficulties in the repatriation of funds.
- Extensive import licensing requirements.
- Insufficient contract protections.
- Tariffs: Uzbekistan's approximate average applied tariff on GHGIRTs is 3 percent. Since Uzbekistan is not yet a WTO Member, it has not formally committed to bind its tariffs and could raise them at any time.
- Weak IPR protection: Uzbekistan is listed on USTR's Special 301 Watch List.

Pakistan

While Pakistan has pursued increased economic liberalization in recent years, including the signing of a TIFA with the United States in 2003 and pending negotiations on a Bilateral Investment Treaty (BIT), the country still lacks some of the political infrastructure and economic policies that foster foreign investment in GHGIRTs. Questions about the sanctity of contracts, the impartiality of the judiciary, and the preferential treatment of domestic firms create concerns for U.S. companies seeking to export GHGIRTs to Pakistan and/or invest there. Moreover, IPR enforcement in the country has been weak, although it is improving, and testing and certification standards have historically been inconsistently applied. In addition, corruption and high tariff rates serve as barriers to trade for U.S. environmental technology exporters.

Key Trade Barriers:

- Weak legal infrastructure (e.g., contract enforcement, judicial impartiality, corruption).
- Inconsistent application of standards.
- Tariffs: Pakistan's approximate average applied tariff on GHGIRTs is 14 percent. Pakistan's maximum average bound tariff on GHGIRTs is 75 percent.²⁴
- Weak IPR protection: Pakistan is listed on USTR's Special 301 Watch List.

²⁴ Source: Individual Country Data Submissions to WTO, 2005.

Nigeria

Nigeria's political and economic climate presents many challenges and has proven to be a cross-cutting barrier to investment and import of GHGIRTs from the United States. Corruption and graft have been reported at all levels of the Nigerian political system, and fair contract enforcement and unbiased judicial proceedings have historically been a problem. Protection for IPR is inadequate, and tariffs on GHGIRTs are high. Nigeria's dependence on oil revenues (this sector represents 45 percent of GDP and 95 percent of merchandise exports) often suppresses the development of other sectors, including cleaner technologies. Lengthy and expensive port practices and inconsistent customs procedures pose a direct obstacle to imports of GHGIRTs. The WTO 2005 Trade Policy Review for Nigeria cites "[h]igh domestic transaction costs, lack of information, burdensome rules of origin, and stringent standards and technical regulations" as direct barriers to trade with Nigeria.²⁵ Moreover, an underdeveloped national infrastructure, arbitrary regulatory measures, and murky legal codes further contribute to Nigeria's lack of foreign investment in the non-oil sector. The United States and Nigeria are working together to improve trade relations and address barriers under the auspices of the U.S.- Nigeria TIFA, concluded in February 2000. At the TIFA council meeting in July 2006, both nations reaffirmed their commitment to improving market access, implementing WTO agreements, and building trade capacity in Nigeria.

Key Trade Barriers:

- Lack of infrastructure, transparency, and rule of law.
- Burdensome rules of origin and slow, inconsistent customs procedures.
- Corruption.
- Tariffs: Nigeria's approximate average applied tariff on GHGIRTs is 17 percent. Nigeria's maximum average bound tariff on GHGIRTs is 40 percent.²⁶
- Weak IPR protection.

Algeria

Despite the country's status as a major world exporter of natural gas and oil, the Algerian government's extensive involvement in the hydrocarbons sector has been reported to slow the adoption, investment in and the importation of GHGIRTs. Although the government has moved toward economic liberalization, notably through the signing of a TIFA with the United States in 2001, the military elite, state bureaucrats, and labor unions have largely opposed such economic reforms, on the basis that increased competition and an empowered private sector would undermine their entrenched interests. High tariff rates and irregular judicial proceedings are further barriers to the import and adoption of GHGIRTs. As a sign of Algeria's commitment to open its market and remove these and other barriers, it is working to accede to the WTO.

Key Trade Barriers:

²⁵ World Trade Organization. "Trade Policy Review: Nigeria. Report by the Secretariat." Published 13 April 2005. (WT/TPR/S/147).

²⁶ Source: Individual Country Data Submissions to WTO, 2003.

- Excessive government intervention in the economy, particularly in the hydrocarbons sector.
- Lack of transparency and fair competition.
- Tariffs: Algeria's approximate average applied tariff on GHGIRTs is 11 percent. Since Algeria is not yet a WTO Member, it has not formally committed to bind its tariffs and could raise them at any time.

Philippines

The Philippine government has put into place several policies that work to discourage trade and investment in GHGIRTs. Regulations that require majority Filipino ownership of infrastructure and utility projects, the prohibition of land ownership by non-nationals, and rules that exclude foreign engineers and other professionals from practicing in the country, work to deter U.S. firms from investing in GHGIRTs in the Philippines. In addition, customs practices are reported to be irregular and corrupt, and government regulatory bodies often lack sufficient training. Privatization has been slow, and many state-owned enterprises are consistently unsuccessful and often prove a drain on the national economy. Corruption in the judiciary and poor enforcement of intellectual property laws further contribute to the underdeveloped economic climate in the Philippines. These and other barriers continue to be addressed through the U.S.-Philippines TIFA, which has experienced some success in improving transparency through dialogue on these issues.

Key Trade Barriers:

- Foreign ownership restrictions and other requirements that discriminate against non-nationals.
- Corruption.
- Weak legal infrastructure.
- Tariffs: the Philippines' approximate average applied tariff on GHGIRTs is 4 percent. The Philippines' maximum average bound tariff on GHGIRTs is 50 percent.²⁷
- Weak IPR protection: the Philippines is listed on USTR's Special 301 Watch List.

Iraq

The democratically elected Iraqi government understands the importance of fostering a sound economic system in the country, but its efforts to supply critical infrastructure have been repeatedly undermined by the insurgent sabotage. Deliberate attacks on Iraq's electrical supply grid have made it very difficult for businesses to operate, and terrorist raids on the oil production apparatus have drained a major source of public revenues and an important source of reconstruction financing. With security risks to both personnel and property so widespread, U.S. companies are hesitant to invest large sums of money in Iraq at present. Also, as a result of the former statist policies, most of the economy remains in the government's hands. The hydrocarbon industry, which accounts for over 90% of both government revenues and exports,

²⁷ Source: Individual Country Data Submissions to WTO, 2005.

still remains almost exclusively a government preserve, although pending legislation may change that. However, as the security situation stabilizes, Iraqis will begin the long process of economic development and will discover financial opportunities that were not previously possible. The redevelopment of Iraq's oil and gas sector make it an excellent candidate for the latest GHGIRTs. Iraq's WTO accession process, our bilateral U.S.-Iraq Joint Commission on reconstruction and Economic Development (JCRED), and our TIFA all provide opportunities for further engagement with the Iraqi Government on economic liberalization measures.

Key Trade Barriers:

- Excessive state involvement in the hydrocarbon sector.
- Widespread security risks.
- Tariffs: Iraq currently imposes a uniform 5% "reconstruction levy" on all imports. It has not established tariff bindings.

Vietnam

On July 13, 2000, the United States and Vietnam signed an historic bilateral trade agreement (BTA), concluding a four-year negotiation to normalize trade relations. Under the BTA, Vietnam committed to make sweeping economic reforms, which created trade and investment opportunities for both U.S. and Vietnamese companies, and has been the foundation of United States – Vietnam trade and economic relations. Vietnam's efforts to implement its BTA commitments are subject to regular review by a Joint Committee established for that purpose. However, barriers still remain, including lack of government transparency, particularly in the standards development process. Also, a large state-owned industrial sector, which accounts for 41 percent of industrial output, represents a significant barrier to foreign investment and the import of GHGIRTs. Corruption, lack of adequate and effective IPR protection, state interference in the judicial process, and generally high tariffs serve as further impediments to the import of environmental technologies. Vietnam is working to address these barriers and to join the rules-based global trading system. It has moved steadily through the WTO accession process, and is currently in the final stages of gaining membership. As part of this process, Vietnam also signed a Bilateral Market Access Agreement with the United States on May 31, 2006. This Agreement will increase trade between Vietnam and the United States, and help further advance the country's economic liberalization efforts.

Key Trade Barriers:

- Lack of government transparency, corruption and excessive state involvement in the market.
- Tariffs: Vietnam's approximate average applied tariff on GHGIRTs is 5 percent. Since Vietnam is not yet a WTO Member, it has not formally committed to bind its tariffs and could raise them at any time.
- Weak IPR protection: Vietnam is listed on USTR's Special 301 Watch List.

Colombia

While much work remains to be done, the economic, security and crime-fighting reforms of the Uribe government have helped develop a rules-based and hospitable environment to foreign investors. The recently negotiated U.S. – Colombia Trade Promotion Agreement (TPA) will further improve trade prospects with Colombia for U.S. GHGIRT producers. In particular, the TPA will reinforce commitments to protect IPR, effectively enforce environmental laws, improve transparency, eliminate tariffs on GHGIRTs, and open Colombia's market to U.S. environmental services firms. A Joint Committee will be established to review implementation of the Agreement and provide a forum for discussion of any remaining bilateral trade barriers.

Key Trade Barriers:

- Tariffs: Currently Colombia's approximate average applied tariff on GHGIRTs is 12 percent and its maximum average bound tariff on GHGIRTs is 35 percent, but tariffs will be reduced to zero upon implementation of the TPA.²⁸
- Weak IPR protection: Colombia is listed on USTR's Special 301 Watch List.

Chile

U.S. companies seeking to export GHGIRTs to Chile encounter very few barriers to trade and investment. Chile continues to be one of the most open economies in South America, and the U.S. – Chile FTA, which entered into force in 2004, further contributed to this openness by eliminating tariffs on GHGIRTs, improving IPR protection and transparency, and expanding trade in environmental and energy services. U.S. exports of GHGIRTs have increased nearly 10 percent since the implementation of the FTA, from \$461 million in 2004 to \$506 million in 2005.²⁹ Cooperation on environmental issues has also increased, and Chile has undertaken further efforts to effectively enforce its environmental laws. While there continue to be some concerns about IPR enforcement, Chile is taking steps to address this issue. A Joint Committee has been established to review implementation of the Agreement and provide a forum for discussion of any remaining bilateral trade barriers. Overall, Chile is generally open to the import and adoption of GHGIRTs from the United States.³⁰

Key trade barriers:

- Weak IPR protection: Chile is listed on USTR's Special 301 Watch List.

Libya

While Libya has gradually undertaken the process of opening up to the global community, the legacy of thirty years of socialist policies has presented major obstacles to the country's

²⁸ Source: Individual Country Data Submissions to WTO, 2005.

²⁹ Source: U.S. International Trade Commission Dataweb.

³⁰ Chile's tariffs for non-U.S. imports are as high as 6 percent, according to 2005 UNCTAD Trains Data. The U.S. - Chile FTA eliminated tariffs on U.S. exports of GHGIRTs to Chile immediately upon entry into force in 2004.

international economic integration efforts. Libya's public renunciation of its nuclear weapons program, among other actions, has encouraged the United Nations and the United States to remove some of the extensive trade sanctions that have long kept Libya from taking part in the global economy. The vast majority of foreign investment in Libya has been directed to the country's oil production and petroleum refining industries. Due to the sector's prominence in Libya's economy and further development underway, there is great potential for the importation and adoption of advanced GHGIRTs. However, obstacles to conducting business with Libya remain. Among the principal concerns for U.S. companies are widespread corruption, lack of government transparency and impartiality, and excessive government intervention in the market, which have slowed adoption of and investment in GHGIRTs. As a sign of its intent to address these and other barriers, Libya began WTO accession negotiations in 2004, and the United States is actively involved in those negotiations.

Key Trade Barriers:

- Corruption.
- Excessive government intervention in the economy, in particular the oil and gas sector.
- Lack of government transparency and rule of law.

Turkmenistan

Turkmenistan has made limited progress in political and economic liberalization efforts since the fall of the Soviet Union over a decade ago. Slow and corrupt customs procedures undermine the importation and adoption of GHGIRTs. Moreover, currency exchange restrictions, lack of adequate and effective IPR protection, and extensive state ownership of vital industries, such as those in the oil, gas and steel sectors, slow the importation of and investment in environmental technologies such as GHGIRTs. As a major producer of natural gas, Turkmenistan has great potential to adopt these important technologies. In recent years, Turkmenistan has made measured progress through its partnership in the U.S.-Central Asian TIFA. Unfortunately, Turkmenistan has not applied for WTO membership, signaling a lack of interest in joining the international, rules-based trading system.

Key Trade Barriers:

- Lack of government transparency and rule of law.
- Slow and corrupt customs procedures.
- Large state-owned enterprises dominate the market.
- Weak IPR protection: Turkmenistan is listed on USTR's Special 301 Watch List.

Bangladesh

The fragile democracy and largely impoverished citizenry of Bangladesh provide a challenging business climate for U.S. companies seeking to export and invest in GHGIRTs. Corruption is widespread, and the rule of law is generally considered to be weak. Very low tax revenues in Bangladesh leave the country unable to establish much of the infrastructure necessary for

economic development. Foreign direct investment would go a long way to help eliminate this cycle, but a lack of government transparency often breeds distorted market signals, leaving investors disinterested in projects in Bangladesh. While its constitution provides for an independent judiciary, Bangladesh's legal system is often slow and inefficient. High tariffs and corruption in customs procedures create additional barriers to the import of environmental technologies.

Key Trade Barriers:

- Corrupt and inefficient customs procedures.
- Lack of transparency and weak rule of law.
- Tariffs: Bangladesh's approximate average applied tariff on GHGIRTs is 9 percent. Bangladesh's maximum average bound tariff on GHGIRTs is 25 percent.³¹

Azerbaijan

The legacy of the Soviet Union continues to impact Azerbaijan and its transition to a market economy. Oil production in Azerbaijan is on the rise and negotiation of production-sharing arrangements with foreign firms is underway. A consortium of Western oil companies began pumping from a large offshore field in earlier this year, through a \$4 billion pipeline it built from Baku to Turkey's Mediterranean port of Ceyhan. Economists estimate that by 2010 revenues from this project will double the country's current GDP.³² These and other oil and energy-related contracts create new opportunities for the adoption and importation of GHGIRTs. However, Azerbaijan struggles with weak rule of law and corruption. It has only recently begun making progress on economic reform, and old economic ties and structures are slowly being replaced. Trade with Russia and the other former Soviet republics is declining in importance while trade is building with countries in the Middle East and Europe, including in particular Turkey. Azerbaijan has exhibited a desire to become more fully integrated into the global economy and is currently negotiating its accession to the WTO. The United States is an active supporter of Azerbaijan's bid to join the WTO.

Key Trade Barriers:

- Weak rule of law and corruption.
- Tariffs: Azerbaijan's approximate average applied tariff on GHGIRTs is 4 percent. Since Azerbaijan is not yet a WTO Member, it has not formally committed to bind its tariffs and could raise them at any time.

³¹ Source: Individual Country Data Submissions, 2005.

³² CIA, The World Factbook, Azerbaijan, updated September 7, 2006
<https://www.cia.gov/cia/publications/factbook/geos/aj.html#Econ>.

IV. Negotiations Underway to Address Trade Barriers

Since taking office, President Bush has demonstrated his commitment to opening markets and eliminating trade barriers to create new opportunities for U.S. businesses. USTR continues to seek historic advances in free and fair trade, including the completion of the Doha Round of multilateral trade talks, the negotiation of new bilateral and regional trade agreements and the vigorous enforcement of our trade laws and international rights. Working with Congress, USTR is committed to maintaining U.S. leadership in promoting economic growth and political freedom around the world through peaceful and open commerce.

The increasingly integrated global economy of the 21st century offers unparalleled opportunities for the United States. Free markets and open trade have helped make American economic accomplishments possible and have spurred economic growth throughout the world. It is in the national interest to encourage the rest of the world to embrace market-based economic reforms and open trade, particularly in the case of GHGIRTs, for which there are compelling environmental policy incentives to liberalize trade as well.

With 95 percent of the world's people living outside U.S. borders and hundreds of millions of new potential consumers overseas with economic liberalization in Eastern Europe and the rapid growth of the middle class in China, India and elsewhere, the United States will continue to be aggressive in opening foreign markets to U.S. environmental goods and services.

The Administration has focused on tangible progress on the bilateral, regional and multilateral levels to expand trade opportunities for U.S. producers of GHGIRTs.

Bilateral and Regional Trade Initiatives

USTR is working to open markets and increase transparency, rule of law and respect for IPR through bilateral and regional trade initiatives, including TIFAs and FTAs. These initiatives are particularly well-tailored to address many of these barriers and fully take into account the importance of high technology products, complex new intellectual property standards, labor and environmental considerations, and the growth of the service sector. Already, the impact of these free trade accords has been impressive. While analyses have not yet been conducted that identify the specific trade effects of some of our most recent FTAs, we have seen a rise in U.S. exports to our FTA partners since the agreements entered into force. For example, U.S. exports of GHGIRTs to Mexico and Chile have grown more than 9 percent each year to each country since implementation of the respective FTAs.³³

U.S. FTAs concluded by this Administration since 2001, combined with the earlier Israel FTA and NAFTA, have expanded U.S. export opportunities and offered U.S. consumers more choices at lower prices. These accords now cover roughly \$925 billion in two-way trade – nearly 36 percent of the total of U.S. trade with the world. U.S. exports under these agreements amount to over \$400 billion a year, or 45 percent of annual U.S. exports. Where an FTA is in effect, U.S.

³³ Source: U.S. Department of Commerce, International Trade Administration.

exports are growing a healthy 20 percent per year on average, more than twice the rate of growth for U.S. exports to non-FTA countries.³⁴

Key Provisions of U.S. Free Trade Agreements to the Export of GHGIRTs:

- **Industrial Tariffs and Market Access:** FTAs call for the elimination of all tariff lines upon entry into force, or the gradual reduction in tariffs over a set period of time after entry into force. The specific terms of the elimination of tariffs varies by agreement.
- **Intellectual Property Rights:** FTAs complement and enhance existing international standards for the protection of intellectual property by establishing high standards for the protection of copyrighted works, trademarks, patents and other IP areas, and by providing strong rules for the enforcement of these rights.
- **Trade in Services:** FTAs provide improved commitments across services sectors and increased transparency and cooperation between parties in the financial, energy, environmental and other services sectors. Rights to establish subsidiaries, branches and joint ventures are examples of the benefits of free trade in services. FTAs also call for increased openness in the exchange of services in fields that have direct environmental links, such as mining, construction, architecture and engineering.
- **Investment:** FTA investment chapters and bilateral investment treaties (BITs) establish a more secure and predictable legal framework for U.S. investors in partner countries. FTAs and BITs protect all forms of investment, including enterprises, debt, concessions and contracts. These agreements also establish the right of investors to receive a fair market value for their property in the event of an expropriation and provide them access to binding international arbitration for claims that an FTA or BIT obligation has been violated.
- **Transparency:** FTAs require U.S. trading partners to promptly publish all laws and regulations, to allow for a period of public comment, to establish fair, open and transparent administrative and judicial proceedings, and to eliminate bribery and corruption.
- **Environment:** FTAs require that U.S. trading partners effectively enforce their environmental laws. To this end, the agreements prohibit countries from weakening or reducing their environmental laws in order to attract trade or investment. FTAs also establish mechanisms for the cooperative promotion of environmental technologies and practices.
- **Oversight:** FTAs create an administrative body to oversee implementation of the agreements, and to address any issues that may arise.

³⁴ The 2006 Trade Policy Agenda and 2005 Annual Report of the President of the United States on the Trade Agreements Program was issued in March 2006. The 2006 Annual Report can be found at www.ustr.gov.

In addition, USTR is working to address weak IPR protection and enforcement through the Special 301 review process. This is an annual review that examines in detail the adequacy and effectiveness of countries' IPR protection regimes. Through this process, more than half of the countries covered in this report have been designated in the categories of Priority Watch List or Watch List. Placement of a trading partner on these lists indicates that these countries will be the focus of increased bilateral attention.

USTR is also working to address trade barriers in many of these developing countries through TIFAs and is working jointly with the State Department through BIT negotiations to address investment restrictions. For example, the U.S.-Central Asian TIFA provides the opportunity to discuss basic trade, investment and environmental issues with five regional trade partners that are not yet integrated into the multilateral trading system. The TIFA partnership with Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan lays the foundation for the development of expanded trade relations in the future, and can help to promote the use of GHGIRTs in these developing countries. In promoting the adoption and implementation of such technologies during this critical phase of this region's growth, the TIFA recognizes the importance of sustainable development.

The United States has established TIFAs with the following countries covered in this report: Algeria; Egypt, COMESA;³⁵ Indonesia; Philippines; Kazakhstan; Kyrgyz Republic; Tajikistan; Turkmenistan; Uzbekistan; Iraq; Nigeria; South Africa; Thailand; and Malaysia. The United States has concluded BITs with the following countries covered in this report: Argentina; Bangladesh; Egypt; Kazakhstan; and Azerbaijan.

³⁵ COMESA, the Common Market for Eastern and Southern Africa, consists of the following countries: Angola, Burundi, Comoros, D.R. Congo, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Sudan Swaziland, Uganda, Zambia, and Zimbabwe.

TIFAs and BITs: Promoting Fair and Open Trade and Investment Policies

The objective of a TIFA is to establish a dialogue on trade and investment issues between the United States and its trading partner(s). TIFAs establish a Joint Council on Trade and Investment, chaired on the U.S. side by USTR with full interagency participation, and on the other side by the partner's parallel ministry. TIFA Councils provide a structured framework for regular discussion of specific trade and investment issues, such as intellectual property rights, standards, economic reform and privatization programs, the regulatory decision-making process, environmental protection and the role of the private sector. TIFAs also enhance mutual efforts to assist countries' accession to the WTO or implementation of WTO commitments. The United States uses TIFA Council meetings to focus technical assistance with economic reforms, including those essential for WTO accession.

BITs protect private investment, assist in developing market-oriented policies in partner countries and promote U.S. exports. The BIT program's basic aims are to:

- Protect U.S. investment in countries where investor rights are not already protected through existing agreements (such as modern treaties of friendship, commerce and navigation, or free trade agreements);
- Encourage the adoption of market-oriented domestic policies that treat private investment in a transparent and non-discriminatory way; and
- Support the recognition of international law standards consistent with these objectives.

U.S. BITs guarantee investors and covered investments national and most-favored-nation treatment across the full life-cycle of investment; limit the expropriation of covered investments and require parties to pay prompt, adequate and effective compensation when expropriation occurs; oblige each party to permit the free transfer of investment-related funds into and out of its territory; restrict the imposition on covered investments of performance requirements, such as local content targets; prohibit requirements that companies hire senior managers of a particular nationality; guarantee covered investments the right to hire top managerial personnel of their choice; and offer investors the right to submit investment disputes to binding international arbitration.

Multilateral Trade Initiatives

As important as these bilateral and regional successes have been, the opportunity for the greatest gains in trade comes from the multilateral system. The ultimate goal is to open markets and to eliminate barriers across a broad range of products and services among all U.S. trading partners throughout the world. The WTO offers two main avenues for seeking new, binding market access commitments: 1) USTR is working with other WTO Members for improved market access for goods and services covered by this report as part of the Doha Development Agenda; and 2) USTR is working with countries that are acceding to the WTO to encourage trade liberalization in these developing and transforming economies, and we are using the opportunities provided in these accession negotiations to expand market access for U.S. exports of all products, including GHGIRTs.

Doha

The historic opportunity to advance our trade liberalization objectives is the Doha Development Agenda, launched in 2001. The United States energized the WTO talks prior to the ministerial meeting in Hong Kong in December 2005 with a comprehensive proposal to make deep cuts in agricultural tariffs and reduce trade-distorting agricultural subsidies, if other countries would take reciprocal steps in their markets. In the negotiations on non-agricultural market access (NAMA), the United States has strongly endorsed the so-called Swiss formula that would cut tariffs on all industrial goods – including GHGIRTS – cutting the highest tariffs most, but with two different rates of reduction based on the stage of a country’s development. The United States, together with the European Communities, New Zealand, Singapore, Norway, Canada and Switzerland, also tabled a bold proposal to eliminate all tariffs on environmental goods, including GHGIRTs, and address non-tariff barriers facing these technologies.³⁶

In services trade, the United States has consistently sought commitments from WTO Members to expand market access for a broad range of sectors, including environmental and energy services. Improved commitments in these services sectors will ensure nondiscrimination and predictable market access for U.S. services suppliers. Many of these services, including those related to renewable energy and air pollution control, are often delivered in conjunction with the import of GHGIRTs.

Despite the recent suspension in the Doha negotiations, the United States will continue to lead in the effort to open markets and reform global trade through a successful conclusion to the Doha Round. However, we cannot and will not act unilaterally. The Administration believes that only real movement in agriculture, industrial goods and services will unlock the full potential of the Doha Round for all WTO Members. USTR is actively seeking a new way forward for the Doha Round.

³⁶ WTO proposal TN/TE/W/65, May 9, 2006, can be found at www.ustr.gov.

U.S. Leadership on Market Access and Sustainable Development at the WTO

Increasing Market Access: The United States is an active advocate for an outcome on environmental goods and services that will lower prices and increase availability of environmental technologies – including GHGIRTs – and services for the world’s businesses and consumers, in particular those in developing countries.

Reducing Tariff Rates: Global exports of environmental goods are already on the rise, growing 52 percent from 1999 to 2004, from \$273 billion to \$415 billion. Reducing tariffs, which are as high as 60 percent in some countries, and non-tariff barriers to these products will reduce the tax burden to consumers and make these beneficial technologies cheaper and more widely available.

U.S. Doha Goals Relevant to Trade in GHGIRTs:

- Improved market access for environmental goods, including GHGIRTs, and environmental, energy and related services;
- Trade facilitation through increased government transparency in import and customs procedures;
- Technical assistance and capacity building;
- Removal of trade-distorting subsidies that can hide the real market costs of energy intensive production;
- Achieving sustainable development objectives in the overall negotiations.

WTO Accessions

Seven of the 25 developing countries covered in this report are currently negotiating their accession to the WTO. WTO accession negotiations involve a detailed review of the applicant’s entire trade regime by the Working Party and bilateral negotiations for market access of goods and services. Applicants are expected to make necessary legislative changes to implement WTO institutional and regulatory requirements, to eliminate existing WTO-inconsistent measures, and to make trade liberalizing specific commitments on market access for industrial and agricultural goods and services. Most accession applicants take these actions prior to accession.

The objective of U.S. involvement in the accessions is to ensure a high standard of implementation of WTO provisions by new Members and to encourage trade liberalization in developing and transforming economies, as well as to use the opportunities provided in these negotiations to expand market access for U.S. exports, including exports of GHGIRTs. Adoption of WTO commitments to protect intellectual property and provide access to environmental and energy services suppliers are critical to promoting the adoption of GHGIRTs. In addition, commitments to reduce, and in some cases eliminate, tariffs and non-tariff barriers to important technologies such as GHGIRTs also contribute to a level playing field for U.S. exporters. WTO accession also offers an opportunity to address other barriers identified in this report, including transparency and corruption. Overall, the WTO accession process often results in significant economic and legal reforms in the acceding country. These reforms are

significantly helpful in providing a legal and administrative framework that is conducive to the adoption of GHGIRTs.

The Year Ahead

In the year ahead, the Administration is committed to creating new momentum for a bipartisan consensus to open markets and to eliminate barriers to trade in GHGIRTs around the world, and specifically in the 25 developing countries covered in this report. Working in partnership with Congress, the Administration will promote an aggressive, proactive agenda for trade in GHGIRTs. The Administration's top three priorities will be: 1) successfully concluding the WTO Doha negotiations, specifically a robust outcome that yields real new market access for U.S. exporters of environmental goods and services; 2) extending bilateral and regional economic ties and expanding opportunities for U.S. manufacturers and exporters of GHGIRTs through TIFAs, FTAs, WTO accession negotiations and BITs; and 3) protecting U.S. interests and rights through the vigorous enforcement of U.S. and international trade laws and rules.

In parallel to its WTO efforts, the Administration will move to negotiate new bilateral and regional trade agreements to create a host of new opportunities for U.S. exporters. U.S. exports to FTA partners have grown more than twice as fast as those to countries with which the United States does not have an FTA. U.S. bilateral and regional agreements can and do yield significant economic and environmental benefits. Developing U.S. economic ties with FTA partners also creates the opportunity for an improved relationship overall and encourages greater cooperation in the multilateral arena. For all of these reasons, the Administration is negotiating and considering FTAs with countries in Asia, Latin America, the Middle East and Africa. Recently-concluded FTA negotiations with Peru, Columbia and Oman, along with negotiations launched with Ecuador, the Southern African Customs Union (SACU), Panama, Thailand, Malaysia, Korea and the United Arab Emirates, should result in new market opportunities in countries with which current U.S. two-way trade is more than \$66 billion per year.

The United States will also continue its efforts to establish and to use effectively our TIFAs with many of the 25 countries identified in this report. TIFAs can be an important step toward a free trade relationship and can help open markets and generate investment in important sectors, such as GHGIRTs. For countries such as China and India, where we do not have a TIFA in place, we will use bilateral fora such as the U.S.-China JCCT and the U.S.-India Trade Policy Forum to address trade barriers, including those identified in this report.

USTR's bilateral and multilateral trade negotiating efforts fully support the commitment, made by G-8 Leaders at the Sea Island Summit, to promote innovation, energy efficiency and conservation; improve policy, regulatory and financing frameworks; and accelerate deployment of cleaner technologies, particularly GHGIRTs. USTR is collaborating with other U.S. Government agencies to advance the Asia-Pacific Partnership on Clean Development and Climate, and is working with partnership countries (Australia, China, India, Japan, and South Korea) to foster new investment opportunities, build local capacity and remove barriers to the trade in cleaner, more efficient technologies in a variety of settings, including bilateral and regional TIFAs, FTAs and the WTO.

The Administration is committed to working with and consulting Congress and the American people at every step of its trade agenda. Close bipartisan consultation with Congress and Trade Advisory Committees, and more informally with companies and industries that produce and trade in GHGIRTs, is vital to accomplishing the Administration's agenda. Opening up new markets to U.S. environmental goods and services while vigorously enforcing U.S. trade laws and rights related to these important technologies creates real opportunities to reduce greenhouse gas emissions intensity on a global scale.

Annex 1: Renewable Energy and Air Pollution Control Products as Proposed by the United States to the World Trade Organization for Tariff Liberalization*

RENEWABLE ENERGY PRODUCTS

HS 6 Harmonized System 6-digit Description

391721	TUBES, PIPES & HOSES, RIGID OF POLYMERS OF ETHYLENE (specifically piping for methane gas removal/reuse, leachate collection, etc. from landfills)
391722	TUBES, PIPES & HOSES, RIGID, POLYMERS OF PROPYLENE (specifically piping for methane gas removal/reuse, leachate collection, etc. from landfills)
391723	TUBES, PIPES & HOSES, RIGID, POLYMERS OF VINYL CHLORIDE (specifically piping for methane gas removal/reuse, leachate collection, etc. from landfills)
392010	PLATES, SHEETS, FILM, FOIL AND STRIP OF PLASTICS, NOT SELF-ADHESIVE, NON-CELLULAR, NOT REINFORCED OR LAMINATED ETC., OF POLYMERS OF ETHYLENE (specifically HDPE or flexible membrane landfill liners and/or covers for methane collection)
730820	TOWERS AND LATTICE MASTS OF IRON OR STEEL
730900	TANKS ETC, OVER 300 LITER CAPACITY, IRON OR STEEL (specifically tanks or vats for anaerobic digesters for biomass gasification)
761100	TANKS ETC, OVER 300 LITER CAPACITY, ALUMINUM (specifically tanks or vats for anaerobic digesters for biomass gasification)
840211	WATERTUBE BOILERS STEAM PRODUCTION EXCEEDING 45 TONS PER HOUR
840212	WATERTUBE BOILERS STEAM PRODUCTION NOT EXCEEDING 45 TONS PER HOUR
840219	VAPOR GENERATING BOILERS, NOT ELSEWHERE SPECIFIED OR INDICATED (N.E.S.O.I), INCLUDING HYBRID
840220	SUPER-HEATED WATER BOILERS
840290	SUPER-HEATED WATER BOILERS & STEAM GENERATION BOILER PARTS
840410	AUXILIARY PLANT FOR STEAM, WATER AND CENTRAL BOILER
840420	CONDENSERS FOR STEAM OR OTHER VAPOR POWER UNITS
840490	PARTS FOR AUXILIARY PLANT FOR BOILERS, CONDENSERS FOR STEAM, VAPOR POWER UNIT
840681	TURBINES, STEAM & OTHER VAPOR, OVER 40 MW, N.E.S.O.I (specifically stationary steam turbines over 40 MW)
840682	TURBINES, STEAM AND VAPOR, NOT OVER 40 MW, N.E.S.O.I (specifically other vapor turbines)
840690	PARTS FOR STEAM AND OTHER VAPOR TURBINES (specifically parts suitable for use with stationary steam turbines over 40MW, stationary steam turbines not over 40 MW, other vapor turbines.)
841011	HYDRAULIC TURBINES, WATER WHEELS, NOT OVER 1,000 KW
841012	HYDRAULIC TURBINES & WATER WHEELS POWER > 1,000KW < 10,000KW
841013	HYDRAULIC TURBINES AND WATER WHEELS POWER >10,000KW
841090	PARTS, INCLUDING REGULATORS, FOR HYDRAULIC TURBINES & WATER WHEELS
841181	GAS TURBINES OF A POWER NOT EXCEEDING 5,000 KW (specifically, other gas turbines, not exceeding 5,000 kW)
841182	GAS TURBINES OF A POWER EXCEEDING 5,000 KW (specifically other gas turbines exceeding 5,000 kW)
841919	INSTANT/STORAGE WATER HEATERS EX INSTANT GAS WATER HE (specifically solar water heaters)
841950	HEAT EXCHANGE UNITS, INDUSTRIAL TYPE
848340	GEARS; BALL OR ROLLER SCREWS; GEAR BOXES, ETC (specifically for wind turbines)

848360 CLUTCHES & SHAFT COUPLINGS (INCLUDING UNIVERSAL JOINTS) (specifically for wind turbines)

850161 AC GENERATORS (ALTERNATORS) < 75 KVA OUTPUT AC (specifically for all electricity generating renewable energy plants)

850162 AC GENERATORS (ALTERNATOR) > 75 KVA BUT =< 375 KVAAC (specifically For all electricity generating renewable energy plants)

850163 AC GENERATORS (ALTERNATOR) > 375 KVA BUT =< 750 KVAAC (specifically for all electricity generating renewable energy plants)

850164 AC GENERATORS OF AN OUTPUT EXCEEDING 750 KVAAC (specifically for all electricity generating renewable energy plants)

850231 GENERATING SETS, ELECTRIC, WIND-POWERED

850239 GENERATING SETS, ELECTRIC, N.E.S.O.I (specifically Gas turbine sets for biomass plants)

850300 PARTS OF ELECTRIC MOTORS, GENERATORS & SETS (specifically parts of gas and wind powered turbines)

850440 STATIC CONVERTERS; ADP POWER SUPPLIES (specifically inverters for photovoltaic solar equipment)

854140 PHOTOSENSITIVE SEMICONDUCTOR DEVICE INCLUDING PHOTOVOLTAIC CELL ETC (specifically solar cells)

900190 OPTICAL FIBERS AND OPTICAL FIBER BUNDLES; SHEETS AND PLATES OF POLARIZING MATERIAL; LENSES, PRISMS, MIRRORS AND OTHER OPTICAL ELEMENTS, OF ANY MATERIAL, UNMOUNTED, OR OTHER THAN SUCH ELEMENTS OF GLASS NOT OPTICALLY WORKED (mirrors other than glass specifically for solar concentrator systems)

900290 PRISM, MIRRORS, MOUNTED & PARTS & ACCESSORIES, N.E.S.O.I (mirrors of glass specifically for solar concentrator systems)

AIR POLLUTION CONTROL PRODUCTS

HS 6 Harmonized System 6-digit Description

840410 AUXILIARY PLANT FOR STEAM, WATER AND CENTRAL BOILER

840420 CONDENSERS FOR STEAM OR OTHER VAPOR POWER UNITS
PRODUCER GAS OR WATER GAS GENERATORS, WITH OR WITHOUT THEIR PURIFIER; ACETYLENE GAS GENERATORS AND SIMILAR WATER PROCESS GAS GENERATOR, WITH 840510 OR WITHOUT THEIR PURIFIERS (specifically only those with purifiers.)

840999 PARTS SUITABLE FOR USE SOLELY OR PRINCIPALLY WITH THE ENGINES OF HEADING NO. 8407 OR 8408 (specifically industrial mufflers)

841459 FANS, N.E.S.O.I

841480 AIR/GAS PUMPS, COMPRESSORS AND FANS ETC, N.E.S.O.I

841780 INDUSTRIAL OR LAB FURNACES & OVENS, INCLUDING, NONELECTRIC, N.E.S.O.I (specifically waste incinerators)

841790 PARTS OF INDUSTRIAL OR LABORATORY FURNANCES & OVENS, INCINERATORS, NONELECTRIC (specifically parts of waste incinerators)

841919 INSTANTANEOUS OR STORAGE WATER HEATERS, NONELECTRIC (specifically solar water heaters)

841960 MACHINERY FOR LIQUEFYING AIR OR GAS

842139 FILTER/PURIFY MACHINE & APPARATUS FOR GASES N.E.S.O.I (including catalytic converters)

842199 FILTER/PURIFY MACHINE & APPARATUS PARTS

*The United States proposed an initial list of environmental goods for tariff reduction/elimination to the WTO in June 2005, TN/TEAW/52. The complete list can be found on USTR's website, www.ustr.gov. This list of products is under review and negotiation; it could change. USTR will report on any updates to the list of products in subsequent reports.

**Annex 2: Approximate Average Tariffs Applied at
Border and Maximum Average Bound (Ceiling) Tariff
Rates for Renewable Energy and Air Pollution Control
Products**

Country	Approximate Average Applied Tariffs	Maximum Average Bound (Ceiling) Tariffs
China	9%	35%
India	15%	40%
South Africa	3%	25%
Mexico	0%	0%
Brazil	14%	35%
Indonesia	6%	40%
Thailand	7%	30%
Kazakhstan*	4%	N/A
Malaysia	7%	30%
Egypt	7%	60%
Argentina	6%	35%
Venezuela	12%	37%
Uzbekistan*	3%	N/A
Pakistan	14%	75%
Nigeria**	17%	40%
Algeria*	11%	N/A
Philippines	4%	50%
Iraq*	5% "reconstruction levy"	
Vietnam*	5%	N/A
Colombia	12%	35%
Chile	0%	0%
Libya*	No Data Available	
Turkmenistan	No Data Available	
Bangladesh	9%	25%
Azerbaijan*	4%	N/A

* These countries are currently negotiating their accession to the WTO. Because they are not yet WTO Members, they do not necessarily have tariff bindings and could therefore raise their tariff rates at any time and to any level. These countries also do not necessarily apply their tariffs on a Most Favored Nation (MFN) basis.

** Data from 2003

Source: World Trade Organization (WTO), 2005; For accession countries data sources as follows:

- Algeria: United Nations TRAINS database, 2005
- Azerbaijan: United Nations TRAINS database, 2002
- Kazakhstan: Country Trade Officials, 2006
- Uzbekistan: United Nations TRAINS database, 2005
- Vietnam: Country Trade Officials, 2006