



## New American Contract Policy Paper Green Trade Balance

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Green investment is a major pillar of the president's economic recovery plan. Yet, America's dependence on foreign countries to produce green technologies may undermine this recovery strategy. Using a list of green goods derived from the Organization of Economic Cooperation and Development (OECD) and the Asia-Pacific Economic Cooperation (APEC), we have determined that the United States ran an overall green trade deficit of -\$8.9 billion in 2008, including a deficit of -\$6.4 billion in the critical category of renewable energy, one of the main targets of the Obama administration's green agenda. The U.S. economy also suffered a significant deficit in the pollution management category. On the positive side, the United States ran modest surpluses in two categories--energy efficiency and a grouping of other environmental goods related to water purification and sustainable agriculture.

If current trends continue, the green trade deficit can be expected to widen further as the administration's agenda increases domestic demand but without sufficient measures to increase domestic production. If the deficit continues to grow, the United States will forego the creation of millions of high-wage, high-skill green manufacturing jobs and lose its potential to be a global producer as well as a consumer of green technologies.

### Methodology Used to Determine the Green Trade Balance

To calculate the green trade balance, we have used lists of green goods compiled from two highly respected organizations: the OECD's illustrative list of environmental goods and the Early Voluntary Sectoral Liberalization Initiative for Environmental Goods published by APEC. These lists have been widely used in WTO negotiations and together are considered a standard for green or environmental goods. Using a composite of these two lists, we then gathered trade data from the United States International Trade Commission to determine the imports and exports for each group of green goods, from which we then calculated America's green trade balance.

The combined OECD and APEC list of environmental goods does have some limitations. It excludes goods used only in part for environmental purposes. For example, the towers upon which wind power blades and turbines rest may have other purposes, such as carrying cell phone transmitters or electricity lines. These goods are not included in the list as they are not predominantly used for environmental purposes. Conversely, there may be goods on the list that are not used exclusively for a "green" purpose. For example, scales, which are included as instruments to monitor sewage, are included in the list but may also be used for non-environmental uses.

Because of these limitations, one should not consider this an exhaustive list of green goods or a definitive picture of

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#### Related Programs:

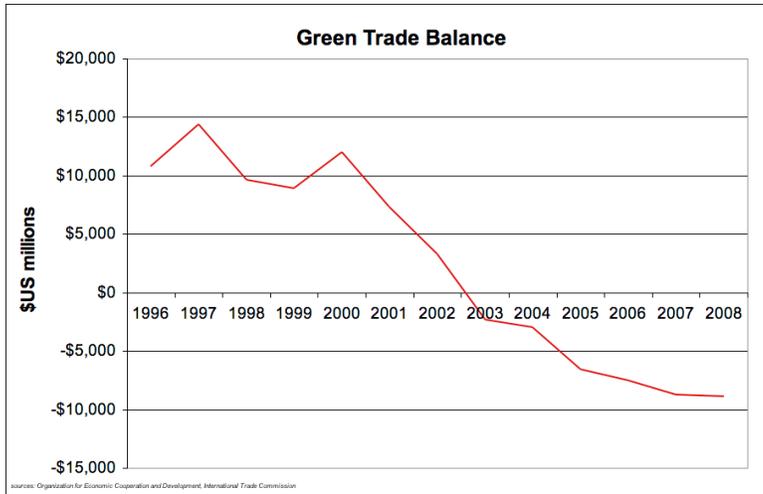
American Infrastructure Initiative,  
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United States' green trade balance. Nevertheless, this study is a good indicator of the import and export patterns within different categories of green goods and our overall green trade balance.

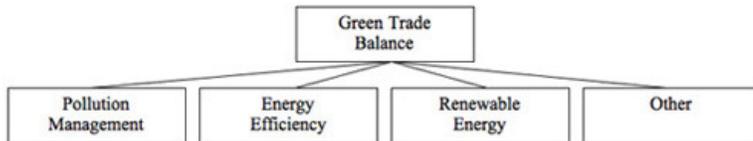
### America's Green Trade Balance

Over the past decade, America's green trade balance has deteriorated significantly, moving from a surplus of \$14.4 billion in 1997 to a deficit of nearly -\$8.9 billion in 2008 (chart 1). In order to better understand the green trade balance, we have broken it down into four categories: pollution management, energy efficiency, renewable energy, and other (charts 2 and 3). As we will see, the deterioration in the green trade balance is the result of widening deficits in the two largest categories: pollution management and renewable energy.

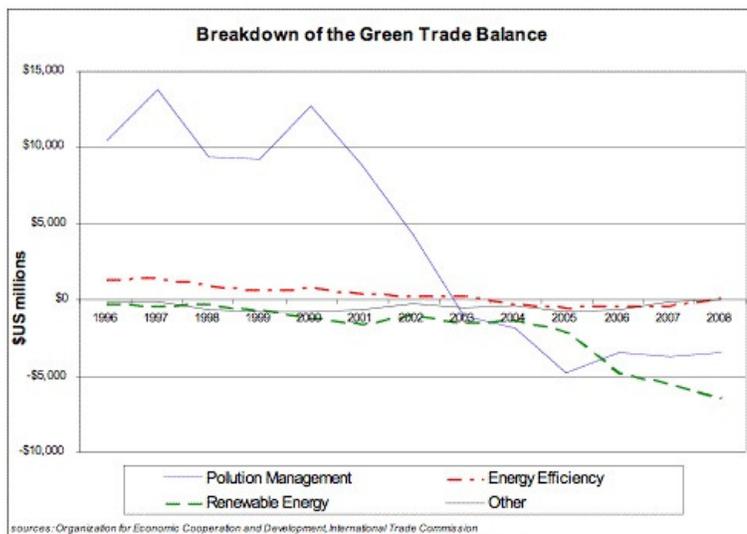
**Chart 1:**



**Chart 2: Breakdown of the Green Trade Balance**



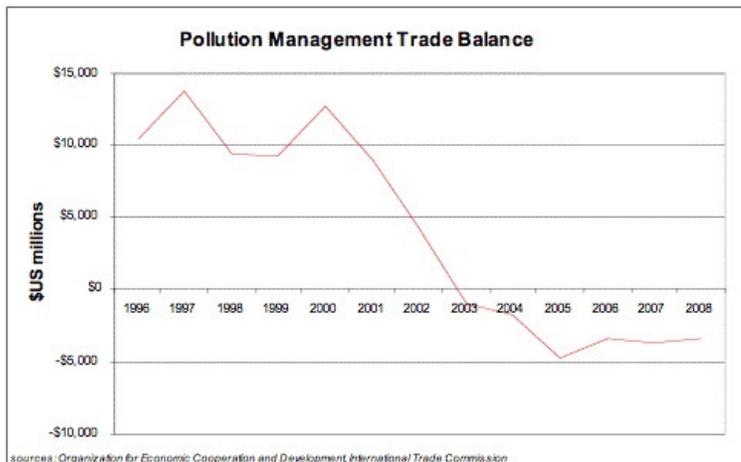
**Chart 3:**



## Category I: Pollution Management

Pollution management includes items related to air pollution management, wastewater and solid waste management, and instruments and equipment for environmental monitoring. Nine out of ten of the goods with the largest trade surplus (meaning exports outpace imports) appear in the pollution management category. The majority of these goods are technologically advanced goods to monitor the environment, for which the United States has traditionally had a trade advantage. But, even with these advantages, the trade balance in this category has deteriorated significantly since 1996, moving from a \$10.5 billion surplus in 1996 to a -\$3.5 billion deficit in 2008 (chart 4). The trade balance deteriorated quickly from 2000 to 2005, falling \$17.4 billion, and has leveled off at an annual deficit of about -\$3.5 billion.

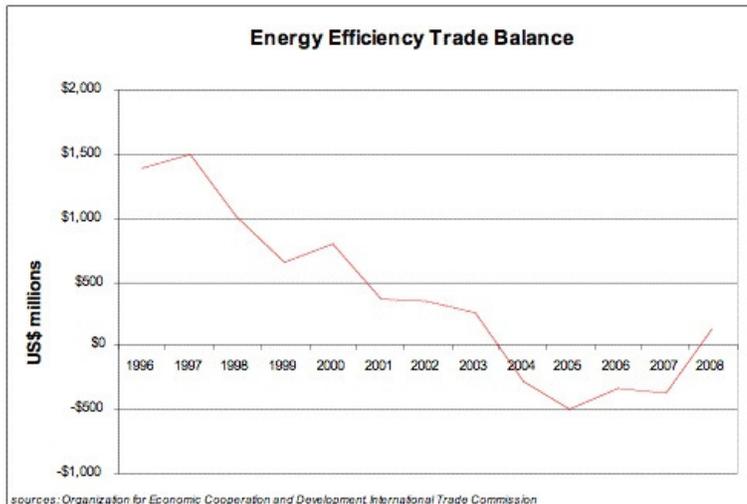
Chart 4:



## Category II: Energy Efficiency

The energy efficiency category includes goods to increase energy efficiency, such as insulating materials, thermostats, and fluorescent lamps. The trade balance in this category deteriorated steadily after 1997, but has recovered since 2005, moving into a positive overall trade balance in 2008 (chart 5). However, the magnitude of the trade surplus in energy efficient goods is quite small (\$130 million), and therefore its positive effect on the overall green trade balance is negligible. The goods in this category are likely to be in higher demand as the recovery program increases government support for retrofitting buildings and for energy-efficiency enhancing investments. Therefore, the trends in this category are likely to have a significant impact on the green trade balance in the future.

Chart 5:

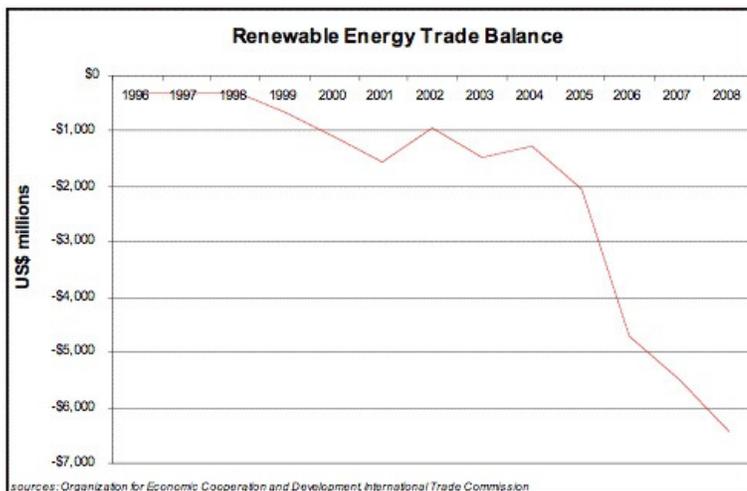


### Category III: Renewable Energy

The goods in the renewable energy category include solar photovoltaic cells, solar thermal, wind generating sets, hydraulic turbines, ethanol and methanol. The balance of trade in renewable energy has moved from a trade deficit of nearly -\$300 million in 1997 to a deficit of -\$6.4 billion in 2008. Since 2004, the trade deficit in renewable energy has widened considerably and now accounts for the greatest part of the decrease in the trade balance for the 2005-2008 time period (chart 6).

The recent deterioration in the renewable energy trade balance is particularly worrying, because like the area of energy efficiency, renewable energy is projected to be the largest growth area of the green economy in future years. If recent trends are any indication, increased U.S. demand may not be met by increased U.S. production but by an increase in imports, resulting in a further deterioration of our trade balance.

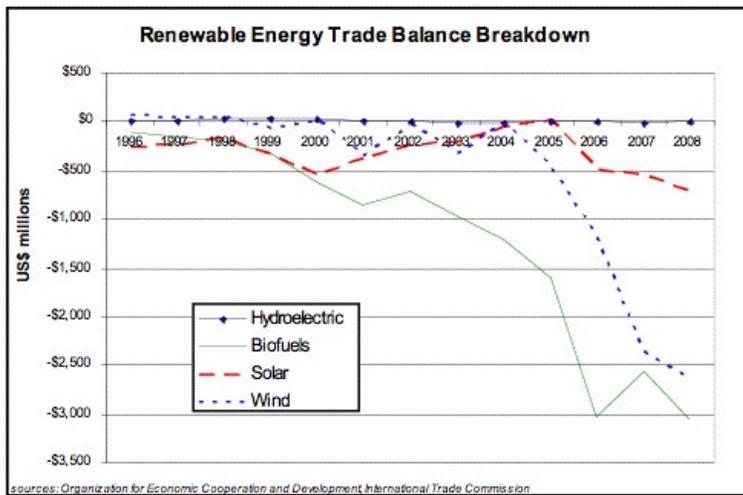
Chart 6:



### Renewable Energy Trade Balance Breakdown

This point is well illustrated if one breaks renewable energy down into its component parts: solar, wind, biofuels, and hydroelectric power (chart 7). As the chart below indicates, we have seen a significant erosion in the trade balance in the three growth areas of renewable energy in the last four years-wind, solar, and biofuels. This does not augur well for the future of the green trade balance.

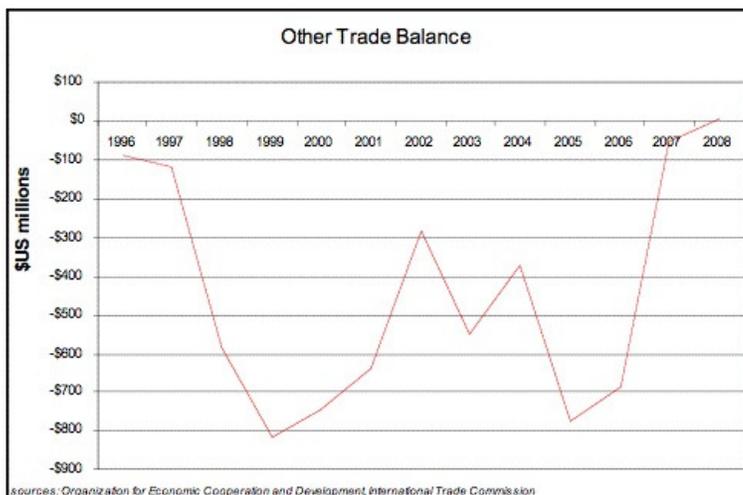
Chart 7:



#### Category IV: Other

The Other category includes goods in three areas: clean products such as hydrogen peroxide, water purification systems, and goods for sustainable agriculture and fisheries. There are few goods in this category and they do not have a large impact on the overall green trade balance. The largest trade deficit reached in this category was -\$815 million in 1999 (chart 8). Since then, the trade balance has fluctuated, moving slightly into positive territory in 2008.

Chart 8:



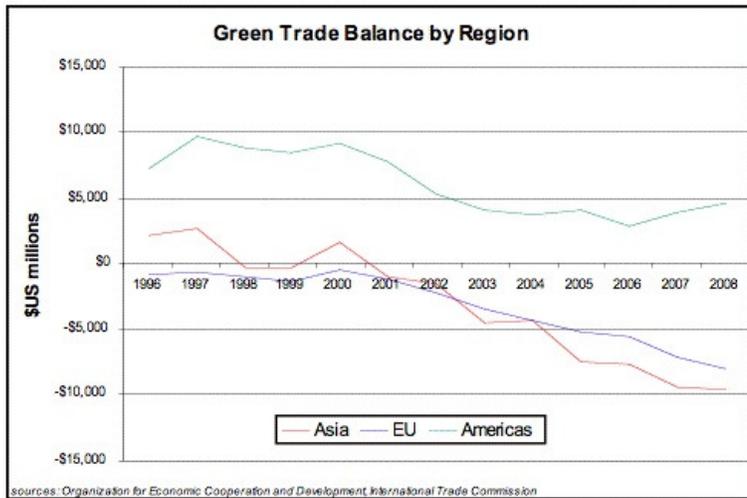
#### Green Trade Balance by Region

The green trade balance has deteriorated most sharply with our largest trading partners. With Asia, we have gone from a trade surplus of \$2.1 billion in 1996 to a trade deficit of -\$9.7 billion in 2008. Meanwhile, our trade deficit with Europe has moved from -\$800 million in 1996 to -\$8.1 billion in 2008. We enjoy a green trade surplus with countries in the Americas and with other economies around the world (chart 10). However, it is important to note that while our trade surplus with other countries in the Americas is positive, it is not as large as it was ten years ago (chart 9).

With Asia, we run a large and growing deficit in wind generating sets and photovoltaic cells as well as in

environmental goods such as valves, fluorescent bulbs, and mufflers. With the European Union, we have a deficit in wind generating sets, valves, regulating instruments, and compressors.

**Chart 9:**



**Chart 10:**

**US Green Trade Balance by Region, 2008**

	Asia	EU	Americas	Rest of World
Exports	19,258,818,732	15,681,747,090	31,189,380,733	9,083,914,111
Imports	28,881,129,170	23,733,225,928	26,778,074,396	4,900,621,365
<b>Trade Balance</b>	<b>-\$9,622,310,438</b>	<b>-\$8,051,478,838</b>	<b>\$4,411,306,337</b>	<b>\$4,183,292,746</b>

Sources: Organization of Economic Cooperation and Development, U.S. International Trade Commission

## Conclusion

The green trade balance has deteriorated significantly over the past decade and a half, indicating that the United States is increasingly reliant on the rest of the world to supply its green technologies. In particular, the green trade balance has deteriorated in the renewable energy sector—the main focus of the Obama administration's green economy program—and has widened steadily since 1996 with our largest trading partners in Europe and Asia.

The trends in America's green trade balance should caution policymakers against over-promising about the jobs and investment we can expect from government spending to support the green economy. If the green recovery is to deliver more jobs and spur more domestic investment, it will need government measures to encourage domestic production as well as domestic consumption.

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