

United States International Trade Commission



Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions (Investigation No. 332-552)

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Thank you Mr. Chairman and members of the Commission it is a pleasure to be here today.

The information that I will be sharing with you is preliminary data as a result of research been conducted for the publication later this year of a Cuba Energy monograph which attempts to supplement and update a similar report, "Cuba's Energy Future: Strategic Approaches to Cooperation", published by Brookings in 2010.

Mr. Chairman Energy is the engine of economic growth.

Reliable, competitively priced, sustainable, secure and clean energy is crucial in restarting, sustaining and expanding economic growth in transitional, developing and emerging economies.

Such will be the case for Cuba in a post embargo scenario within a decentralized Cuban economic model.

We estimate Mr. Chairman that the future value of US-Cuba trade and investments in the energy sector, in a post embargo scenario and within a decentralized Cuban economic model is expected to be between **\$10-12 billion during a development period of 10 years**, mostly as a result of major capital infrastructure investments in the sector.

1- Petroleum and Natural Gas LNG Supply

Two thirds of Cuba's petroleum demand of approximately 140,000 barrels per day currently relies on imports, and Venezuela is the largest source of these imports.

This petroleum dependency is valued today at \$1.8 billion annually (\$50.00 bln).

We believe, that as a result of Cuba's anticipated future economic growth, petroleum and natural gas demand could grow to over 250,000 barrels of oil equivalent per day (boe) during the development period.

The United States is today a net exporter of petroleum fuels and about to be an important exporter of Liquefied Natural Gas LNG, and possibly an exporter of light sweet crude oil as well. United States oil and natural gas companies could become important fuel suppliers to Cuba.

As a reference case, assuming that fifty percent of Cuba's future petroleum/LNG imports could be sourced from the United States, petroleum and natural gas LNG trade with Cuba could have a market value of approximately **\$0.9 billion**.

2- Oil and Natural Gas Exploration, Production, Processing and Distribution.

The United States Geological Survey USGS estimates Cuba's off-shore deepwater undiscovered hydrocarbon reserves to be at 5.5 billion barrels of oil and 9.8 trillion cubic feet of natural gas.

Even though recent exploratory drilling in Cuba's north coast proved to be unsuccessful, the area recently prospected represents only a small portion of Cuba's yet to be explored 112,000 square kilometers Gulf of Mexico Economic Exclusive Zone EEZ.

Today international oil companies operating in Cuba's upstream oil and gas sector have to import equipment, services and personnel from Canada and or the North Sea; unable to access nearby U.S. Gulf Coast petroleum industry equipment and services.

The development cost of one deep-water exploratory prospect is estimated to be between \$150-200 million. Production cost will add another \$50-100 million per well.

The estimated value of US equipment and services for 7/10 successful offshore exploration and production development prospects in Cuba in a post embargo scenario could amount to **\$3.5 billion**.

American oil companies, oil equipment and service companies, and engineering and construction companies have the capital, technology, and operational know-how to explore, produce, and refine in a safe and responsible manner Cuba's current oil production (50 mbd at a low 7% recovery factor) of heavy oil and associated natural gas reserves by the application of Enhanced Oil Recovery EOR methods; as well as expanding refinery and distribution infrastructure/capacity to meet future petroleum and liquefied natural gas imports.

Estimated US equipment and services for crude oil production, and downstream processing and distribution of petroleum and natural gas LNG infrastructure could amount to **\$1.1 billion**.

3- Electric Power Generation.

According to research by Rice University's James Baker Institute Cuba's future electric demand, under a decentralized economic system and with the lifting of the U.S. embargo, could generate a per capita income growth of 0.5% - 2% per annum which would require additional electric power generation capacity on a range from 1.6 to 4.2 GW. Cuba's current electric consumption is of approximately 19,000 GWh; this demand could very well double in the future.

The value of upgrading current capacity and building new thermoelectric (oil and natural gas LNG) capacity as well as renewal power from wind and solar is estimated to be about **\$3.5 billion**. Cuba's National Electric Development program aims to generate 24 percent of its electricity from renewable sources such as wind and solar by 2030.

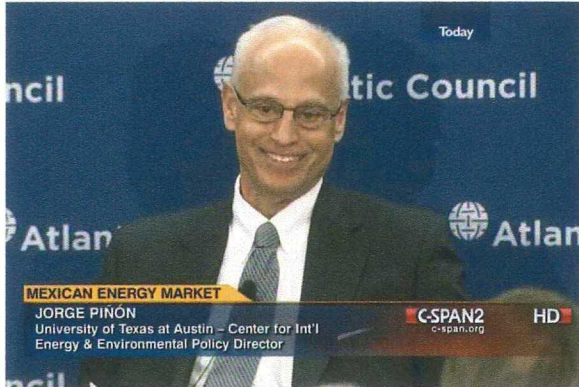
4- Sugarcane Ethanol-Biomass Industry

Under a recapitalized sugarcane industry Cuba could produce approximately 50-70 mbd of sugarcane fuel ethanol and generate net electric power (from biomass) of approximately 100-250 KWh per ton of sugarcane.

The estimated potential for both agricultural and processing capacity investment in Cuba's sugarcane industry could be approximately **\$2.5 billion**.

5- Petrochemicals – Plastics – Fertilizers

We estimate that the annualized future value -market share- of basic and secondary petrochemicals and agricultural chemicals and fertilizer exports from the U.S. to Cuba could amount to over **\$0.2 billion**.



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Mr. Piñón began his long career in the energy sector when he joined Shell Oil Company's supply and transportation organization in 1975. He was president and CEO of Transworld Oil USA prior to joining Amoco Corporation in 1991 as president of

Amoco Corporate Development Company Latin America. In this position Mr. Piñón represented the business development and joint venture efforts in Latin America between Amoco Corporation and state oil companies.

In 1994 he was transferred to the downstream oil sector to serve as president of Amoco Oil de México and president of Amoco Oil Latin America, based in Mexico City. After the 1999 merger between Amoco and BP, Mr. Piñón was transferred to Madrid, Spain, to manage BP Europe's western Mediterranean petroleum supply and logistics operations. He retired from BP in 2003.

With international experience in business development, joint ventures and relationship management in emerging and transitional markets, and a network of senior energy contacts in Latin America; he is recognized as an independent analyst of regional energy issues, as well as the geopolitics of oil and natural gas in Latin America. He has conducted research and country risk assessments as a Visiting Energy Fellow at the University of Miami's Center for Hemispheric Policy (2005-2010) and at Florida International University's Latin American and Caribbean Center (2010-2011) prior to joining the University of Texas at Austin in 2012.

He is also recognized as an expert on Cuba's energy sector, as well as on the island's future economic transition challenges and opportunities. He is an advisor and a member of the Cuba task force at The Brookings Institution and co-author of *"Cuba's Energy Future: Strategic Approaches to Cooperation"*, Brookings Institution Press 2010.

Mr. Piñón has testified before the U.S. Senate and the U.S. House of Representatives, as well as before the Texas Senate and Texas House of Representatives committees on issues of energy policy and Latin America; he holds a degree in Economics and a certificate in Latin American Studies from the University of Florida, Gainesville.

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