WASHINGTON—The U.S. is pressing China to buy tens of billions of dollars in U.S. aircraft, auto parts, agricultural goods and beef to build goodwill when the two countries' leaders meet Wednesday.

In the run-up to the closely watched event between Chinese President Hu Jintao and President Barack Obama, the two countries are jockeying to set the agenda for the visit, as they haggle over deals. The White House expects the centerpiece of the package to be the sale of Boeing Co. jets.

Leaders of both nations say they want to show that the U.S.-China relationship, which was on the skids last year, is back on track and is mutually beneficial. But they also want to frame the meeting in a way that plays most favorably at home.

"Our relationship is marked by great promise and real achievement," said Secretary of State Hillary Clinton in a speech on Friday. "And more than ever it will be judged on the outcomes it produces."

Mr. Hu's last state visit, in 2006, came before the global financial crisis when the U.S. was clearly a dominant...
economic power. Since then, China has become the world's second-largest economy and its state-orchestrated style of development has become a rival to the U.S.'s more market-oriented approach.

Chinese deal-making is part of nearly all of their state visits abroad—it announced $16 billion in deals in India last month. And given a trade gap with China on track to pass $250 billion last year, the U.S. visit will likely be dismissed by China critics as insufficient.

But the White House considers the deals a way to show concrete benefits from the encounter, when many other issues being discussed—including Iran, North Korea and intellectual-property issues—aren’t easily resolved. The Obama administration also wants to show its ability to add jobs during a time of 9.4% U.S. unemployment.

Given tensions in past months between the two powers, China wants the meeting to go off smoothly and to underscore its new world stature. Since Mr. Hu's last visit to the White House, "China has grown into this strong young man from a teenage boy," said Zhuang Jianzhong, deputy director of the Center for National Strategic studies at Shanghai's Jiao Tong University.

The U.S. goal is tangible progress on issues including trade, currency policy, North Korea and Iran.

In her speech, Mrs. Clinton singled out the need for China's military "to overcome its reluctance at times to join us in building a stable and transparent military-to-military relationship." She was referring to the Chinese military's recent rebuff of Secretary of Defense Robert Gates's bid to re-establish close, regular meetings at top levels.

Mrs. Clinton also said it was vital China join the U.S. "in sending North Korea an unequivocal signal that its recent provocations—including the announced uranium enrichment program—are unacceptable." The U.S. recently credited Beijing for convincing North Korea to calm tensions after it shelled a South Korean island.

This past week, Undersecretary of State Robert Hormats, Commerce Undersecretary Francisco Sanchez and Deputy U.S. Trade Representative Demetrios Marantis spent three days in Beijing ironing out trade and investment issues. They focused on two Chinese buying trips, headed by senior officials of the Chinese Ministry of Commerce and the China Council for the Promotion of International Trade, that are set to begin Saturday and run through Jan. 21.

The two groups plan to visit half a dozen cities, including Boeing's home base of Chicago, where Mr. Hu will meet with U.S. and Chinese business executives Friday.
The aircraft purchases are a priority because Boeing is a symbol of U.S. export strength, and it has facilities and subcontractors around the U.S. China also has great purchasing flexibility when it comes to aircraft because carriers' deals aren't final until they are approved by the government. A Boeing spokesman declined to comment.

China is also looking to highlight its role as an investor in the U.S. auto industry. SAIC Motor Corp., China's largest auto maker, recently bought a $500 million stake in General Motors Co., just under 1% of the company. Chinese investors have bought stakes in auto suppliers.

The focus on purchases, said a senior U.S. official is "in part to reduce the trade imbalance, in part to demonstrate to the American public that there are real job benefits to the relationship with China and, in part, to improve the overall tone and to make the trip successful."

On other commercial issues, the U.S. is pressing China to provide a specific plan for how government agencies and state-owned businesses will buy legitimate software, not knock-off versions. Beijing has already committed to such purchases.

The White House is also seeking commitments that U.S. firms in China won't be shut out of government-backed projects for high-tech products. The U.S. official said it was unclear at this point how much progress would be made in those areas.

China is looking to use the state visit to compel changes in U.S. policy. Beijing blames the Federal Reserve's low interest rates and bond purchases for worsening China's inflation. A delegation of Chinese academics have been visiting Washington, urging the Fed take into account the problems of developing nations when setting policy.

There is little chance the U.S. will agree, said Eswar Prasad, a China scholar at the Brookings Institution, who met with the academics, because of the Fed's mandate to consider domestic economic concerns when setting policy. The Fed also believes boosting the economy helps the global economy because so many nations rely on the U.S. market.

Foreign-exchange policy is also bound to be a big issue at the Obama-Hu meeting. Since China announced in mid-June that it would let its currency float somewhat, it has appreciated about 3.6%—with the yuan strengthening in recent days to new heights.

When accounting for the effects of higher inflation in China compared with the U.S., Treasury Secretary Timothy Geithner said the yuan is moving up at a pace of about 10% a year. That is getting closer to the level the U.S. would like to see.

Either China lets the currency rise to fight higher prices, Mr. Geithner argues, or higher prices will make Chinese exports more expensive anyway. In either case, "competitiveness is going is shifting now in our favor," he said.

—Yoli Zhang in Beijing contributed to this article.

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