ABU DHABI, United Arab Emirates — The United Arab Emirates government in December announced a deal to buy two Patriot missile battalions from The Raytheon Co.

When it comes to air-and-missile defense, the United Arab Emirates is sparing no expense to guard the nation against a looming Iranian threat. And it has the cash to do so.

The coastal nation — just 35 miles across the Strait of Hormuz from Iran — is flush with oil revenues and well within range of Iran’s missiles. Despite the recent downturn in petroleum prices, the UAE’s spending on defense is continuing unabated.

Dan Darling, a Middle East defense analyst with Forecast International, predicted the UAE, Iraq, Saudi Arabia and Israel will collectively spend about $70 billion on defense in 2009. The UAE will account for about $7 billion of that.

Oil-rich Gulf nations still have large cash reserves saved from years of steadily high petroleum prices. One of their biggest expenditures is on air and missile defenses to protect critical assets such as oil fields.

Under a $3.5 billion deal, the UAE by 2012 will receive two air-defense weapons that can be deployed from Patriot launchers: Lockheed Martin's Patriot advanced capability-3 (PAC-3) and Raytheon's guidance enhanced missile.

"What the UAE has asked the U.S. government for is a comprehensive integrated air-and-missile defense effort ... and Patriot is the base piece of that," said Tim Glaeser, Raytheon’s director of business development and strategy for Patriot programs. "This remains a volatile region and there are threats out there. Basically if the countries want to continue to embark on a program of growth and seek stability, they need peace, and if you want peace, you have to have security."

Glaeser said Raytheon has engaged in various levels of talks about selling the Patriot system to all the Gulf Cooperation Council nations. The GCC is a security alliance that includes the UAE, Saudi Arabia, Bahrain, Qatar, Kuwait and Oman.

Raytheon has received permission from the U.S. government to share technical data on the air- and missile-defense system with Qatar. Kuwait and Saudi Arabia already have the Patriot system in place. The company is awaiting word from Saudi Arabia on whether it wants to upgrade its program, Glaeser said.

Near the top of the list of assets that the UAE wants to protect are its oil fields, which are mostly offshore. Its new and towering cities, Abu Dhabi and Dubai, with their gleaming skyscrapers, luxury hotels, and swelling populations, also lie less than 100 miles from Iran’s southern provinces.

The feelings of insecurity in the region date back centuries. The mostly Sunni gulf states see the Shiite led theocracy in Iran as a threat to their internal stability. They have accused Iran of instigating terrorist attacks on their soil and fostering discord amongst their Shiite minorities.
Iran, for its part, has suffered invasions from foreign forces dating back to 1200 when Ghengis Khan’s hordes swept through Persia, sacking and slaughtering along the way. In more recent times, the Iran-Iraq war in the 1980s instigated by Sunni rival Saddam Hussein left thousands dead both on the battlefield and in the cities where Iraq’s air force led a bombing campaign against civilians. And now the forces of the nation’s paramount enemy, the United States, are deployed on its western and eastern flanks in Iraq and Afghanistan.

“Iran and Syria remain focused on building up their missile and rocket arsenals and acquiring air defense systems with Israel in mind, and Saudi Arabia finds itself trying to erode Iran’s manpower edge by accumulating ever-greater military technological superiority over its regional rival,” Darling said in a report.

When it comes to acquiring advanced military technology from the United States, the UAE is considered a trusted ally.

Congress has already approved the nation as the first foreign military sales customer for the terminal high altitude air defense (THAAD).

“Throughout the region we know that the Iranian threat is real,” said Dennis D. Cavin, vice president of international air and missile defense strategic initiatives for Lockheed Martin. The company manufactures both the PAC-3 missile and the THAAD system.

The PAC-3 is a hit-to-kill missile. Its warhead must directly slam into a missile while in flight and break it up in the upper atmosphere. This is seen as crucial in taking out missiles that could be armed with chemical or biological weapons before they reach their targeted areas. If the missile were allowed to rain down on civilian areas with the warhead intact, it could still spread its toxins, explained Shirley P. Gray-Lewis, Lockheed Martin’s THAAD business development director.

The Patriot system can destroy aircraft and ballistic missiles at a range of up to 40 kilometers.

In addition, Raytheon’s Glaeser said the company is in talks to provide the UAE with the surface-launched advanced medium range air-to-air missile, which is designed to be fired from humvee-sized trucks and take out low flying aircraft such as helicopters and unmanned aerial vehicles at ranges of about 18 kilometers.

The company also signed a deal to sell 224 AIM-120C-7 advanced medium range air-to-air missiles configured to be launched from F-16 jet fighters.

These systems together would give the UAE a comprehensive defense against tactical ballistic missiles, cruise missiles, UAVs, rotary-wing and fixed-wing aircraft, Glaeser said.

As for when the UAE would take delivery of the THAAD system, Gray-Lewis declined to speculate. The system is still undergoing testing in the United States.

While Western nations press the Islamic Republic of Iran to cease what they believe to be a program to build a nuclear weapon, a more overt effort is underway in the secretive nation to develop the rockets designed to deliver them.

For decades, Iran has been steadily improving its missile technology allegedly with the help of North Korea, China and Russia. And unlike its nuclear enrichment facilities located in underground facilities, intelligence assets such as spy satellites can easily monitor these efforts.

“Iran is currently pursuing fissile material,” said former National Intelligence Director Mike McConnell in one of his last public speeches before leaving office. “We suspect, but cannot prove that Iran secretly desires a nuclear weapon — certainly a nuclear device.”

“That’s going to — at least from this observer’s point of view ... set off an arms race in the gulf that could be very destabilizing and could have global impact,” he added.

Mark Fitzpatrick, senior fellow for non-proliferation at the International Institute for Strategic Studies, said at the IDEX conference that “more accurate and longer range ballistic missiles would be the likely delivery method of [Iranian] nuclear weapons.”

The only matter of debate is how effective and at what ranges its ballistic missiles can fly.

The International Atomic Energy Agency has Iranian documents in its possession that showed plans for exploding a missile 600 meters above the ground,
which is the altitude where nuclear weapons are normally detonated, said Michael Adler, a public policy scholar at the Woodrow Wilson Center.

“That’s not a height you want to explode a chemical weapon at or a conventional weapon because the effect would be dissipated,” Adler said at a Washington briefing on the Iranian nuclear program.

Iranian officials, when confronted with the documents, said they were forged, he added.

Steven Hildreth, a missile defense and non-proliferation expert at the Congressional Research Service, wrote in a report that there is “little disagreement among most experts that Iran has acquired some number of ballistic missiles from other countries and has developed other ballistic missiles indigenously or in cooperation with others.”

Furthermore, Iran is believed to be pursuing an intercontinental ballistic missile, which would be capable of striking the United States. Whether it will reach that goal by 2015 — as spelled out in 1999 and 2001 National Intelligence Estimates — is a matter of conjecture, Hildreth said.

Short-range ballistic missiles that could strike the Middle East include the Chinese-made CSS-8s, with a range of about 150 kilometers and the Fetah A-110, with a range of about 200 kilometers, he added.

Last July, Iran fired a number of its Shahab missiles in what was widely believed to be a show of force to its Middle East neighbors. The regime claimed the missiles had a 1,250-kilometer range, but was later embarrassed when it was discovered that it had doctored a number of the launch photos.

In February, Iran reportedly sent a 25-kilogram satellite into space using a three-, or perhaps two-stage Safir rocket, which sparked debate within the missile defense community on whether this marked a milestone for the program. Placing a spacecraft into orbit with a two-stage rocket would be an advance, experts have said. And such missiles can be used for peaceful purposes such as space programs, or for delivering weapons.

Bharath Gopalaswamy, a scholar at Cornell University’s peace studies program, wrote in a British American Security Information Council report that “these tests must be viewed with a fair degree of skepticism since Iran has a rich tradition of exaggerating its capability with missiles.”

He also noted that much of Iran’s technology comes from North Korea, and that nation “has yet to indicate their mastery of accurate intermediate, let alone long-range missiles.”

The failure of North Korea’s multi-stage U’nha 2 rocket to reach orbit on April 5 seems to bear out that analysis.