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Bolivia: Defence Budget, Past and Future Procurements

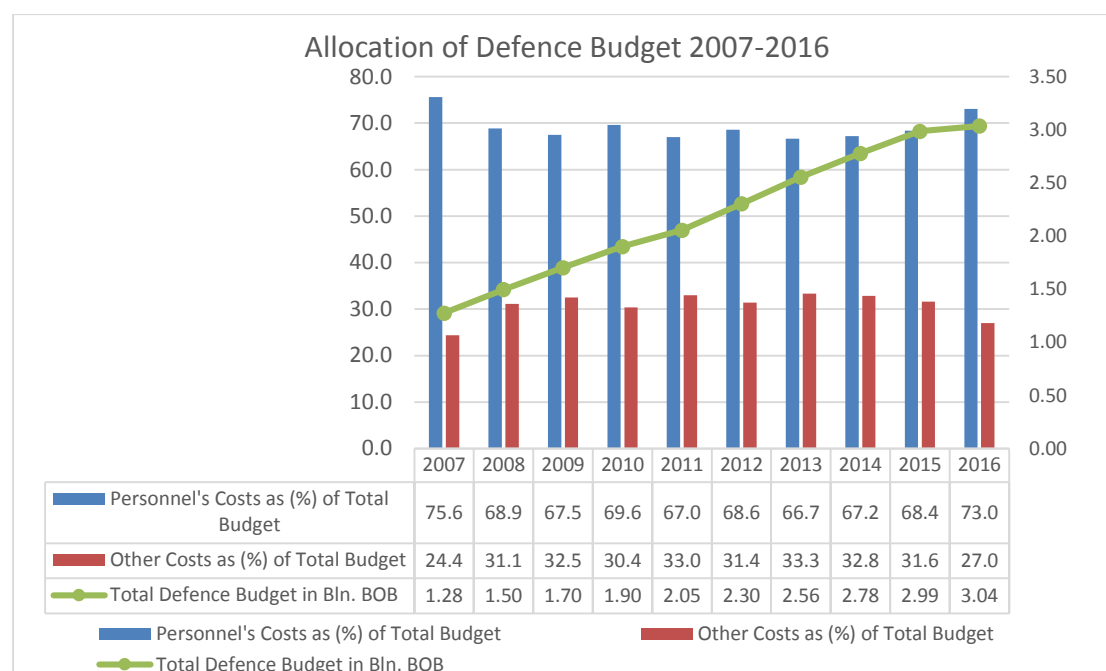

**MINISTERIO DE
DEFENSA**

Bolivia, has recently achieved a significant level of political stability and economic growth. The country's authorities decided to allocate a substantial part of the wealth created to defence. Thus, Bolivia's

defence budget rapidly increased reaching 3.04 billion Bolivian Boliviano -BOB- (approximately 438 million US dollars) in 2016 from 1.28 billion BOB (approximately 184 million US dollars) in 2007. This increase has initiated a comprehensive military modernisation program that seeks to significantly update the country's current defence capabilities. Additionally, it is worth mentioning that the investment efforts of the country have also concentrated in improving the living condition of the military personnel, especially those who are performing military service and border military units. It is indicative that in 2016, the highest portion (73%) of the country's defence budget will be used to pay for salaries and day-to-day expenses of military personnel.



Allocation of Defence Budget 2007-2016



Source: <http://www.economiayfinanzas.gob.bo>

Despite the fact that Bolivia's defence budget is on the rise, the money allocated on defence is still not enough for the materialisation of major defence equipment purchases, something that constricts the country's defence modernisation process. Thus, Bolivia, has never ranked among the major arms importers in Latin America, despite the fact that its domestic arms production capabilities are and have been very limited. In view of this, (the need to modernize national army as well as the tight defence budget) China should be considered the most promising partners in terms of procuring defence assets mainly due to the lower cost of China made equipment.

Cooperation between China and Bolivia has been accelerated over the last years as Bolivia has purchased six K-8 Karakorum-8 trainer aircraft for a total amount of 58 million US dollars. Additionally, Bolivia procured six Z-9 H425 helicopters in 2012. The 103-million US

dollar agreement was finalised in 2012. Additionally, in June 2016, Bolivia was reported to receive 31 new Shaanxi Tiger 4x4 light armoured vehicles developed by Shaanxi Baoji Special Vehicles Company.

For several years one of the country's priorities was to establish an air surveillance radar network that will integrate air defence and civil Air Traffic Management (ATM) data. Thales will be the prime contractor that will satisfy this requirement by supplying a total of thirteen radars across twelve sites, including four air defence radars, one Star2000 primary surveillance radar, two TRAC approach radars and six RSM970 secondary radars. The total value of the contract is estimated to reach 185 million Euros.

Bolivia's helicopter arsenal capabilities have been severely updated during the last five years as the country received 5 AS-532 Cougar/AS-332 (one more is expected to be delivered by the end of 2016) as well as 2 AS-350/AS-550 Fennec light helicopters from France.

Additionally, the country took delivery of 6 AS365/AS565 Panther helicopter from China and 4 second handed Bell-205/UH-1H helicopter from Brazil. The Bell helicopters will be mainly used for anti-narcotics operations.

In September 2016, Russia and Bolivia signed an agreement on military-technical cooperation, which among other involves the sale of equipment and transfer of technology from Russia to Bolivia, as well as a firm commitment by the Russian side to provide support in military training to the Latin American country. The Russian-Bolivian military co-operation agreement should be considered as an attempt from Bolivia's side to create a new alliance in its effort to re-equip the national armed forces over the years to come.

Kyriazis Vasileios
Epicos Newsletter Head Editor

Bolivia: Defence industry Current Capabilities and International Strategic Alliances



Bolivia is heavily dependent on imported equipment for the modernisation of its armed forces, mainly because its domestic arms production capabilities are and have been very limited. In order to avert this local authorities are working towards the expansion of the local defence industrial base. The main goal is the progressive production of a greater amount of military equipment in a bid to reduce foreign dependence and help with national industrialisation. In order to achieve this, the indigenous defence industry rely on assistance from foreign companies to manufacture advanced and sophisticated defence equipment. Additionally, another pillar Bolivia is going to rely for the development of the local defence industry is the Corporación de las Fuerzas Armadas para el Desarrollo Nacional (COFADENA) a public company producing defence equipment, formed by 8 different entities some of which are the most prestigious and recognized defence entities in the country. In 2016 CODAFENA's budget reached 103.5 million Bolivian Bolíviano -BOB- (approximately 15 million US dollars).

COFADENA main entities/companies are the following:

- EMPRESA NACIONAL AUTOMOTRIZ "ENAUTO" designs, develops and manufactures motor vehicles for the armed forces of the country.
- MAXAM FANEXA manufactures explosive for the armed forces of the country as well as the mining and other industries.
- FABRICA BOLIVIANA DE MUNICIONES F.B.M. has the capability to produce ammunition for military and civilian use.
- Unidad Ganadera Campo 23 de Marzo is active in the production, processing and distribution of agricultural and forestry products for the armed forces of the country.

Additionally, it is worth mentioning the recent two hangars were inaugurated at the premises of the Bolivian Air Force (FAB) in the city of Cochabamba, for technical maintenance of helicopters and airplanes. The facility is going to partially cover the air forces' requirements in Maintenance Repair and Overhaul (MRO).

As it is already mentioned in order to further enhance the technological level of the local defence industry Bolivia's authorities have promoted the creation of cooperative schemes with foreign partners. Under this context in September 2016, Russia and Bolivia signed an agreement on military-technical cooperation, which among others the transfer of technology from Russia to Bolivia, as well as a firm commitment by the Russian side to provide support in military training to the Latin American county.

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Epicos "Industrial Cooperation and Offset Projects"



Epicos "Industrial Cooperation and Offset Projects" provides a unique set of online tools enabling the structure, identification and implementation of comprehensive Offsets programs, through a searchable database. By introducing different offset projects and ideas proposed by local A&D industry it ensures the optimum cost for Prime Contractors and reassures that the priorities of local industry are fully met...

[For Further Information Press Here](#)

Development of a new generation ballistic protection vest, integrated with a lightweight Microclimate cooling and heating system in order to meet Future Soldier requirements and applications



A company with extensive experience in the development and production of ballistic protection equipment is proposing the development of a new technology ballistic vest, integrated with an advanced lightweight microclimate cooling and heating system in order to mitigate Future Soldiers' heat stress, allowing them to operate safely and more effectively in all terrains and under extreme weather conditions.

[For Further Information Contact our ICO Department](#)

Mail at: a-kintis@epicos.com

Ruggedized TFT displays capability development for vetronics applications



A company is proposing the collaboration with a Prime Contractor or a third company for the development of fully-ruggedized TFT displays line in order to be utilized in vetronic systems development and installation.

[For Further Information Contact our ICO Department](#)

Mail at: a-kintis@epicos.com



Patria modernises two Border Guard helicopters

Patria

Patria has signed a contract on the upgrading of the avionics systems of two Border Guard Agusta/Bell 412 EP helicopters in order to bring them up to current operational requirements by the end of 2017. This system upgrade comprises the integration of the avionics and mission systems, patient stretchers, the infrared camera (FLIR), and the video data link. After the upgrade is complete, both helicopters will be NVG compatible; in other words, they enable usage of night vision capability in the cockpits. The upgrade will ensure the operational performance of helicopters, and will extend their lifespan by 10 to 15 years. The value of the contract is approximately 3 million euros, with the value of the entire project amounting to around 4.6 million euros. After the system upgrade the helicopters will operate in Northern Finland.

“Patria’s quotation was competitive, and the technical solution that they offered was very good. This contract will ensure that the effective operation of our helicopters in the challenging conditions of Northern Finland continues long into the future,” comments Colonel Antti Pesari from the Border Guard.

As a holder of the EASA Part 21J Design Organization Approval, Patria is will expand its operations not only to cover military aircraft but also to perform demanding modifications on aircraft and helicopters on a civilian register.

“This is a contract of importance for Patria and an initiation of civilian major aircraft modifications. When performing this upgrade, we will be able to draw on collaboration between the various business units of the Group, their know-how and wide collaboration network. The design of the modification will be performed in Finland, with the installation work being performed at Patria’s site in Arlanda, Sweden,” Leo Vanhatalo says.

Patria has a solid background in performing modifications to military aircraft, of which the modernisation project of the cockpits and avionics systems of the Hawk Mk51A and Mk66 aircraft can be referred to as an example. Following modernisation, the lifespan of the aircraft was extended with almost twenty years.

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CAE wins defence contracts valued at more than C\$120 million



CAE today announced that it has won defence contracts valued at more than C\$120 million to provide a range of training services and simulation product upgrades for global military customers. Some of the key contracts include the United States Air Force exercising a contract option for CAE USA to provide MQ-1 Predator/MQ-9 Reaper remotely piloted aircraft (RPA) aircrew training services; the United States Navy exercising contract options on the MH-60 Tech Refresh and Procurement of Simulators program; and the Austrian Armed Forces awarding a contract to upgrade their CAE GESI command and staff training system.

"Our large installed base of existing training devices and simulation systems provide ongoing upgrade and update opportunities along with long-term service and support business," said Gene Colabatistto, CAE's Group President, Defence & Security. "We are pleased to continue our support of the United States Air Force as their training partner on the MQ-1 Predator/MQ-9 Reaper remotely piloted aircraft, which is the world's largest RPA training program."

U.S. Air Force MQ-1 Predator/MQ-9 Reaper

The United States Air Force (USAF) has awarded CAE USA a contract for option year three on the MQ-1 Predator and MQ-9 Reaper remotely piloted aircraft aircrew training services and courseware development program. CAE USA works closely with active-duty USAF personnel to provide classroom, simulator and live flying instruction for more than 1,500 pilots and sensor operators who train annually at Holloman AFB, New Mexico; Creech AFB, Nevada; March Air Reserve Base, California; and Hancock Air National Guard Base, New York.

United States Navy

The United States Navy has exercised additional contract options as part of the MH-60R/S Tech Refresh and Procurement of Simulators (TRPS) program. Under the MH-60 TRPS program, CAE USA is performing major updates and upgrades to the U.S. Navy's suite of MH-60S Sierra and MH-60R Romeo training systems, including tactical operational flight trainers and weapons tactics trainers.

Austrian Armed Forces

CAE was awarded an upgrade contract to provide the latest generation CAE GESI command and staff training system to the Austrian Armed Forces, which has been using its existing CAE GESI constructive simulation system for more than two decades. The latest generation CAE GESI software will be provided to the Austrian Armed Forces in phases over the next year to update and enhance the command and staff training provided to military and civil commanders. Enhancements to the latest version of the CAE GESI software include an easy-

to-use exercise editor, comprehensive after-action-review capability, and interoperability with a range of command and control (C2) systems.

For Further Information [Click Here](#)



Honor Guard of the Polish Prison Guard with a Polish parade rifle

Adam Suliga, CEO of Fabryka Broni „Łucznik” – Radom Sp. z o.o. and Lt. Col. Krzysztof Jędrzejak, Commander of the Central Prison Guard Training Facility in Kalisz have signed an agreement for the supply of 40 pieces of the MSBS-5,56R parade rifle for the honor guard of the Polish Prison Guard. The total cost of the contract amounts to upwards of PLN 440k gross.

On September 9, 2016, on the last day of the XXIVth International Defence Industry Exhibition MSPO, Fabryka Broni, a part of the Polska Grupy Zbrojeniowej S.A. group, and the Prison Guard have officially signed an agreement for the supply of the MSBS-5,56R parade rifle for the Honor Guard unit of the Polish Prison Guard. The meeting was attended by Gen. Jacek Kitliński, General Director of the Prison Guard.

- By signing the agreement with Fabryka Broni the Polish Prison Guard acquires new, all-Polish equipment – said Lt. Col. Krzysztof Jędrzejak, Commander of the Central Prison Guard Training Facility in Kalisz. – Serving honor guard duties with Polish weapons will be a source of pride to us – he adds.

The MSBS-5,56R parade rifle was developed by Fabryka Broni and the Military University of Technology in close cooperation with the Warsaw Garrison Command. The weapon was devised with the idea of replacing the more or less obsolete wz. 1945 SKS rifles in the Polish Armed Forces ceremonial units. It was first presented in an official capacity on July 1, 2014, during the opening of Fabryka Broni new premises.

- The rifle is an all-Polish weapon, modern and modular in its philosophy, enabling tailoring the specific configuration to the needs, so it is particularly pleasing that more pieces are to get into the hands of Polish forces – says Adam Suliga, Fabryka Broni CEO. – Receiving a new rifle in a parade option, the Prison Guard will be able to obtain a full assault option by merely exchanging a single module - the barrel, thus considerably facilitating the officers' work – he adds.

The MSBS-5,56R parade rifle is a rifle type working with blank cartridges only. Compared to the basic rifle option, it involves a 508 mm long barrel, an elongated bed, a magazine capacity of 10 rounds and a fixed reinforced butt. Due to its unique design modularity, the parade rifle can be easily transformed into the standard assault rifle option.

The MSBS-5,56R parade rifle is a model of repeating small arms with all reloading tasks carried out manually. Just like its assault option, it is based on a modularity principle, consisting of the following components: receiver module, trigger chamber module, barrel module, bed module, slide and lock module and the return spring module.

The basic difference between the assault and parade option consists of a special barrel module only supporting blank ammunition for the latter one. Design modularity enables speedy recovery of weapon assault capacity by replacing the said barrel module with its assault option. Furthermore, the parade option is equipped with a special reinforced butt module.

For Further Information [Click Here](#)

Source: Epicos, PGZ

F-35 and Aegis Combat System Successfully Demonstrate Integration Potential in First Live Missile Test

Two pre-eminent weapon systems, the F-35 Lightning II and Aegis Weapon System, worked together for the first time during a live fire exercise. The joint Lockheed Martin, (NYSE: LMT) U.S. Navy and U.S. Marine Corps exercise was the first live fire missile event that successfully demonstrated the integration of the F-35 to support Naval Integrated Fire Control-Counter Air (NIFC-CA).

During the Sept. 12 test, an unmodified U.S. Marine Corps F-35B from the Marine Operational Test and Evaluation Squadron 1, acted as an elevated sensor and detected an over-the-horizon threat. The F-35B sent data through the aircraft's Multi-Function Advanced Data Link (MADL) to a ground station connected to the Aegis Weapon System on the USS Desert Ship (LLS-1), a land-based ship. The target was subsequently engaged and intercepted by a Standard Missile 6.

"One of the key defining attributes of a 5th Generation fighter is the force multiplier effect it brings to joint operations through its foremost sensor fusion and external communications capabilities," said Orlando Carvalho, executive vice president, Lockheed Martin Aeronautics. "Those attributes were successfully proven at White Sands Missile Range in a very realistic demonstration of distributed lethality leveraging a U.S. Marine Corps F-35B and the U.S. Navy's Aegis Weapon System. This only scratches the surface of the potential warfighting capabilities F-35 aircraft will ultimately enable across our military forces."

This capability, when fully realized, will significantly increase the warfighters' situational awareness using Aegis and the F-35 together to better understand the maritime operational environment. Using any variant of the F-35 as a broad area sensor, the aircraft can significantly increase the Aegis capability to detect, track and engage.

"NIFC-CA is a game changer for the U.S. Navy that extends the engagement range we can detect, analyze and intercept targets," said Dale Bennett, executive vice president, Lockheed Martin Rotary and Mission Systems. "The F-35 and Aegis Weapon System demonstration brings us another step closer to realizing the true potential and power of the worldwide

network of these complex systems to protect and support warfighters, the home front and U.S. allies.”

Aegis Baseline 9 delivers a fully open architecture system on U.S. destroyers and is the basis for current and future Aegis Integrated Air and Missile Defense (IAMD). Baseline 9 is being fielded on in-service destroyers, new construction destroyers and Aegis Ashore. The Aegis Common Source Library-enabled derivatives are on the Coast Guard cutters, Freedom variant Littoral Combat Ships and will be included on the upcoming frigate ships.

As a proven world leader in systems integration and development of air and missile defense systems and technologies, Lockheed Martin delivers high-quality missile defense solutions that protect citizens, critical assets and deployed forces from current and future threats. The company’s experience spans missile design and production, hit-to-kill capabilities, infrared seekers, command and control/battle management, and communications, precision pointing and tracking optics, radar and signal processing, as well as threat-representative targets for missile defense tests.

The F-35 Lightning II is a next generation fighter, combining advanced stealth with fighter speed and agility, advanced mission systems, fully fused sensor information, network-enabled operations and cutting-edge sustainment. Three distinct variants of the F-35 will replace various aircraft for the U.S. Air Force, Marine Corps and Navy, and 11 international countries.

For additional information, visit: www.lockheedmartin.com/aegis and www.f35.com.

About Lockheed Martin

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that employs approximately 98,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.

Source: Epicos, Lockheed Martin

Zenith Aviation to Add Two New Learjet 75 Aircraft to its Fleet

Bombardier Business Aircraft announced today that Zenith Aviation, Britain's leading bespoke charter service provider, will take delivery of two brand new Learjet 75 aircraft.

"We are delighted to be once again working with Bombardier and welcoming the Learjet 75 aircraft into our fleet – the Learjet brand is synonymous with our facility at London Biggin Hill," said Stuart Mulholland, Managing Director of Zenith Aviation Ltd. "Having seen the first Learjet 45 aircraft arrive over 17 years ago, we are now very much looking forward to the arrival of the iconic Learjet 75 business jet.

"We've had a hugely successful year for our business and this expansion is a key part of our growth and development strategy moving forward. We are anticipating growing our fleet of managed aircraft and further development of our facilities, and also adding to our Part 145 capability at Biggin Hill Airport over the coming months."

The new charter aircraft are scheduled to arrive at Biggin Hill Airport at the end of September. This will mark a significant upgrade in Zenith Aviation's aircraft charter offering following its move to offer worldwide flights alongside shorter charters to Europe at the beginning of the year. Both aircraft will be managed and chartered by Zenith and are set to join the company's fleet in the coming weeks.

"The Learjet 75 aircraft offers class-leading performance and continues to set the benchmark among private jets in the Light category," said David Coleal, President, Bombardier Business Aircraft. "We look forward to working with Zenith Aviation and are thrilled that they have selected the Learjet 75 aircraft to join their growing fleet."

For Further Information [Click Here](#)

Source: Epicos, Bombardier

Boeing Reveals First Two Aircraft for U.S. Air Force T-X Competition

Boeing and its partner Saab AB will use their two production T-X aircraft, revealed today, to show the U.S. Air Force the performance, affordability, and maintainability advantages of their approach.

Boeing T-X is an all-new aircraft designed specifically for the U.S. Air Force training mission, and takes advantage of the latest technologies, tools and manufacturing techniques. It is an advanced aircraft designed to evolve as technologies, missions and training needs change. The design is more affordable and flexible than older, existing aircraft.

"Our T-X is real, ready and the right choice for training pilots for generations to come," said Boeing Defense, Space & Security President and CEO Leanne Caret.

The Boeing T-X aircraft has one engine, twin tails, stadium seating and an advanced cockpit with embedded training. The system also offers state-of-the-art ground-based training and a maintenance-friendly design for long-term supportability.

"It's an honor to build the future of Air Force training," said Saab President and CEO Håkan Buskhe. "We have created the best solution thanks to great cooperation and a clear strategy since day one."

T-X will replace the Air Force's aging T-38 aircraft. Initial operating capability is planned for 2024.

Swedish defense and security company Saab serves the global market with world-leading products, services and solutions ranging from military defense to civil security. Saab has operations and employees on all continents and constantly develops, adopts and improves new technology to meet customers' changing needs. Saab is a \$4 billion business with approximately 14,000 employees in about 35 countries. Follow on Twitter: @Saab.

For more about Boeing Defense, Space & Security visit www.boeing.com. Follow on Twitter: @BoeingDefense.

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For Further Information [Click Here](#)

Source: Epicos, Boeing

General Atomics Delivers New Pulsed-power Container System to Navy

General Atomics Electromagnetic Systems (GA-EMS) announced today that it has delivered the first of multiple pulsed power containers to the U.S. Navy in support of the railgun development and testing program. Each container includes pulsed power modules and a pulsed power control system for ease of integration into the Navy's Command and Control infrastructure.

"Our advanced energy technologies coupled with our expertise in design, manufacturing, and testing enables us to provide the most energy-dense pulsed power systems available today," stated Nick Bucci, vice president of Missile Defense and Space Systems at GA-EMS. "We look forward to delivering the additional pulsed power containers to the Navy to support their testing and to help advance railgun capabilities now and into the future."

GA-EMS is an industry leader in the design of high energy density capacitors, which are the foundation of pulsed power systems. All manufacturing, assembly of the pulsed power modules, container integration, and complete system testing is done by GA-EMS. GA-EMS also recently announced the successful demonstration of record-breaking pulsed power capacitors in a repetitive fire mode, breaking its previous energy content record.

"We're realizing significant gains in our ability to pack more energy into large-platform capacitors," Bucci continued. "These next generation capacitors will enable significantly higher muzzle energies using a smaller pulsed power footprint, reducing the overall railgun system impact on host platforms."

About General Atomics Electromagnetic Systems

General Atomics Electromagnetic Systems (GA-EMS) Group is a global leader in the research, design, and manufacture of first-of-a-kind electromagnetic and electric power generation systems. GA-EMS' history of technology innovation has led to an expanding portfolio of specialized products and integrated system solutions supporting aviation, missile defense,

power and energy, and processing and monitoring applications for critical defense, industrial, and commercial customers worldwide.

For Further Information [Click Here](#)

Source: Epicos, General Atomics Electromagnetic Systems (GA-EMS)