

Billing Code



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DEPARTMENT OF DEFENSE

Office of the Secretary

[Transmittal No. 21-01]

Arms Sales Notification

AGENCY: Defense Security Cooperation Agency, Department of Defense (DoD).

ACTION: Arms sales notice.

SUMMARY: The Department of Defense is publishing the unclassified text of an arms sales notification.

FOR FURTHER INFORMATION CONTACT: Karma Job at karma.d.job.civ@mail.mil or (703) 697-8976.

SUPPLEMENTARY INFORMATION: This 36(b)(1) arms sales notification is published to fulfill the requirements of section 155 of Public Law 104-164 dated July 21, 1996. The following is a copy of a letter to the Speaker of the House of Representatives, Transmittal 21-01 with attached Policy Justification and Sensitivity of Technology.

Dated: December 17, 2020.

Aaron T. Siegel,

Alternate OSD Federal Register Liaison Officer,

Department of Defense.



DEFENSE SECURITY COOPERATION AGENCY
201 12TH STREET SOUTH, SUITE 101
ARLINGTON, VA 22202-5408

NOV 09 2020

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
H-209, The Capitol
Washington, DC 20515

Dear Madam Speaker:

Pursuant to the reporting requirements of Section 36(b)(1) of the Arms Export Control Act, as amended, we are forwarding herewith Transmittal No. 21-01 concerning the Air Force's proposed Letter(s) of Offer and Acceptance to the Government of the United Arab Emirates for defense articles and services estimated to cost \$10.4 billion. After this letter is delivered to your office, we plan to issue a news release to notify the public of this proposed sale.

Sincerely,


Heidi H. Grant
Director

Enclosures:

1. Transmittal
2. Policy Justification
3. Sensitivity of Technology
4. Regional Balance (Classified document provided under separate cover)

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act, as amended

(i) Prospective Purchaser: Government of the United Arab Emirates (UAE)

(ii) Total Estimated Value:

Major Defense Equipment*	\$ 5.8 billion
Other	\$ <u>4.6 billion</u>
TOTAL	\$ 10.4 billion

(iii) Description and Quantity or Quantities of Articles or Services under Consideration for Purchase:

Major Defense Equipment (MDE):

Fifty (50) F-35A Joint Strike Fighter Conventional Take-Off and Landing (CTOL) Aircraft
Fifty-four (54) Pratt & Whitney F-135 Engines (up to 50 installed and 4 spares)

Non-MDE:

Also included are Electronic Warfare Systems; Command, Control, Communications, Computer and Intelligence/Communications, Navigational, and Identification (C4I/CNI); Autonomic Logistics Global Support System (ALGS); Operational Data Integrated Network (ODIN); Air System Training Devices; Weapons Employment Capability and other Subsystems, Features, and Capabilities; F-35 unique chaff and infrared flares; reprogramming center access; F-35 Performance Based Logistics; software development/integration; aircraft ferry and tanker support; aircraft and munitions support and test equipment; communications equipment; provisioning, spares and repair parts; weapons repair and return support; personnel training and training equipment; weapon systems software, publications and technical documents; U.S. Government and contractor engineering, technical, and logistics support services; and other related elements of logistical and program support.

(iv) Military Department: Air Force (AE-D-SAC)

(v) Prior Related Cases, if any: None

(vi) Sales Commission, Fee, etc., Paid, Offered, or Agreed to be Paid: None

(vii) Sensitivity of Technology Contained in the Defense Article or Defense Services Proposed to be Sold: See Attached Annex

(viii) Date Report Delivered to Congress: **November 09, 2020**

*As defined in Section 47(6) of the Arms Export Control Act.

POLICY JUSTIFICATION

United Arab Emirates – F-35 Joint Strike Fighter

The Government of the United Arab Emirates (UAE) has requested to buy up to fifty (50) F-35A Joint Strike Fighter Conventional Take-Off and Landing (CTOL) aircraft and fifty-four (54) Pratt & Whitney F-135 Engines (up to 50 installed and 4 spares). Also included are Electronic Warfare Systems; Command, Control, Communications, Computer and Intelligence/Communications, Navigational, and Identification (C4I/CNI); Autonomic Logistics Global Support System (ALGS); Operational Data Integrated Network (ODIN); Air System Training Devices; Weapons Employment Capability and other Subsystems, Features, and Capabilities; F-35 unique chaff and infrared flares; reprogramming center access; F-35 Performance Based Logistics; software development/integration; aircraft ferry and tanker support; aircraft and munitions support and test equipment; communications equipment; provisioning, spares and repair parts; weapons repair and return support; personnel training and training equipment; weapon systems software, publications and technical documents; U.S. Government and contractor engineering, technical, and logistics support services; and other related elements of logistical and program support. The total estimated cost is \$10.4 billion.

This proposed sale will support the foreign policy and national security of the United States by helping to improve the security of an important regional partner. The UAE has been, and continues to be, a vital U.S. partner for political stability and economic progress in the Middle East.

The proposed sale of F-35s will provide the Government of the UAE with a credible defense capability to deter aggression in the region and ensure interoperability with U.S. forces. The UAE has demonstrated a commitment to modernizing its military and will have no difficulty absorbing these aircraft into their armed forces.

The proposed sale of this equipment and support represents a significant increase in capability and will alter the regional military balance.

The prime contractors will be Lockheed Martin Aeronautics Company, Fort Worth, TX; and Pratt & Whitney Military Engines, East Hartford, CT. There are no known offset agreements proposed in connection with this potential sale. However, the purchaser typically requests offsets. Any offset agreements will be defined in negotiations between the purchaser and the contractor(s).

Implementation of this proposed sale may require the assignment of U.S. Government or contractor representatives to the UAE. Implementation of this proposed sale will require multiple trips to the UAE involving U.S. Government and contractor representatives for technical reviews/support, program management, and training over the life of the program. U.S. contractor representatives will be required in the UAE to conduct Contractor Engineering Technical Services (CETS) and Autonomic Logistics and Global Support (ALGS) for after-aircraft delivery.

There will be no adverse impact on U.S. defense readiness as a result of this proposed sale.

Notice of Proposed Issuance of Letter of Offer
Pursuant to Section 36(b)(1)
of the Arms Export Control Act

Annex
Item No. vii

(vii) Sensitivity of Technology:

1. The F-35A Conventional Take Off and Landing (CTOL) aircraft is a single-seat, single engine, all-weather, stealth, fifth-generation, multirole aircraft. The F-35A contain sensitive technology, including the low observable airframe/outer mold line, the Pratt & Whitney F135 engine, AN/APG-81 radar, an integrated core processor central computer, a mission systems/electronic warfare suite, a multiple sensor suite, technical data/documentation, and associated software. Sensitive elements of the F-35A are also included in operational flight and maintenance trainers. Sensitive elements of the F-35A CTOL aircraft include hardware, accessories, components, and associated software for the following major subsystems:

a. The Pratt and Whitney F135 engine is a single 40,000-pound thrust class engine designed for the F-35 and assures highly reliable, affordable performance. The engine is designed to be utilized in all F-35 variants, providing unmatched commonality and supportability throughout the worldwide base of F-35 users.

b. The AN/APG-81 Active Electronically Scanned Array (AESA) is a high processing power/high transmission power electronic array capable of detecting air and ground targets from a greater distance than mechanically scanned array radars. It also contains a synthetic aperture radar (SAR), which creates high-resolution ground maps and provides weather data to the pilot, and provides air and ground tracks to the mission system, which uses it as a component to fuse sensor data.

c. The Electro-Optical Targeting System (EOTS) provides long-range detection and tracking, as well as an infrared search and track (IRST) and forward-looking infrared (FLIR) capability for precision tracking, weapons delivery, and bomb damage assessment (BDA). The EOTS replaces multiple separate internal or podded systems typically found on legacy aircraft.

d. The Electro-Optical Distributed Aperture System (EODAS) provides the pilot with full spherical coverage for air-to-air and air-to-ground threat awareness, day/night vision enhancements, a fire control capability, and precision tracking of wingmen/friendly aircraft. The EODAS provides data directly to the pilot's helmet as well as the mission system.

e. The Electronic Warfare (EW) system is a reprogrammable, integrated system that provides radar warning and electronic support measures (ESM), along with a fully integrated countermeasures (CM) system. The EW system is the primary subsystem used to enhance situational awareness, targeting support and self-defense through the search, intercept, location and identification of in-band emitters and to automatically counter infrared (IR) and radio frequency (RF) threats.

f. The Command, Control, Communications, Computers and Intelligence/Communications, Navigation, and Identification (C4I/CNI) system provides the pilot with unmatched connectivity to flight members, coalition forces, and the battlefield. It is an integrated subsystem designed to provide a broad spectrum of secure, anti-jam voice and data communications, precision radio navigation and landing capability, self-identification, beyond visual range target identification, and connectivity to off-board sources of information. It also includes an inertial navigation and global

positioning system (GPS) for precise location information. The functionality is tightly integrated within the mission system to enhance efficiency.

g. The aircraft C4I/CNI system includes two data links, the Multi-Function Advanced Data Link (MADL) and Link 16. The MADL is designed specifically for the F-35 and allows for stealthy communications between F-35s. Link 16 data link equipment allows the F-35 to communicate with legacy aircraft using widely-distributed J-series message protocols.

h. The F-35 Autonomic Logistics Global Sustainment (ALGS) provides a fully integrated logistics management solution. ALGS integrates a number of functional areas, including supply chain management, repair, support equipment, engine support, and training. The ALGS infrastructure employs a state-of-the-art information system that provides real-time, decision-worthy information for sustainment decisions by flight line personnel. Prognostic health monitoring technology is integrated with the air system and is crucial to predictive maintenance of vital components.

i. The F-35 Operational Data Integrated Network (ODIN) provides an intelligent information infrastructure that binds all the key concepts of ALGS into an effective support system. ODIN establishes the appropriate interfaces among the F-35 Air Vehicle, the warfighter, the training system, government information technology (IT) systems, and supporting commercial enterprise systems. Additionally, ODIN provides a comprehensive tool for data collection and analysis, decision support and action tracking.

j. The F-35 Training System includes several training devices to provide integrated training for pilots and maintainers. The pilot training devices include a Full Mission Simulator (FMS) and Mission Rehearsal Trainer (MRT). The maintainer training devices include an Aircraft Systems Maintenance Trainer (ASMT), Ejection System Maintenance Trainer (ESMT), Outer Mold Line (OML) Lab, Flexible Linear Shaped Charge (FLSC) Trainer, F135 Engine Module Trainer, Weapons Loading Trainer (WLT), and other training devices. The F-35 Training System can be integrated, where both pilots and maintainers learn in the same Integrated Training Center (ITC).

k. Other subsystems, features, and capabilities include the F-35's low observable air frame, Integrated Core Processor (ICP) Central Computer, Helmet Mounted Display System (HMDS), Pilot Life Support System (PLSS), Mission Planning System Environment (MPSE), and publications/maintenance manuals. The HMDS provides a fully sunlight readable, bi-ocular display presentation of aircraft information projected onto the pilot's helmet visor. The use of a night vision camera integrated into the helmet eliminates the need for separate Night Vision Goggles. The PLSS provides a measure of Pilot Chemical, Biological, and Radiological Protection through use of an On-Board Oxygen Generating System (OBOGS) and an escape system that provides additional protection to the pilot. OBOGS takes the Power and Thermal Management System (PTMS) air and enriches it by removing gases (mainly nitrogen) by adsorption, thereby increasing the concentration of oxygen in the product gas and supplying breathable air to the pilot. The MPSE provides a mission planning, mission briefing, and a maintenance/intelligence/tactical debriefing platform for the F-35.

2. The Reprogramming Center is located in the United States and provides F-35 customers a means to update F-35 electronic warfare databases.

3. The highest level of classification of defense articles, components, and services included in this potential sale is SECRET.

4. If a technologically advanced adversary were to obtain knowledge of the specific hardware and

software elements, the information could be used to develop countermeasures that might reduce weapon system effectiveness or be used in the development of a system with similar or advanced capabilities.

5. A determination has been made that the United Arab Emirates can provide substantially the same degree of protection for the sensitive technology being released as the U.S. Government. This sale is necessary in furtherance of the U.S. foreign policy and national security objectives outlined in the Policy Justification.

6. All defense articles and services listed in this transmittal are authorized for release and export to the Government of the United Arab Emirates.

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