

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

UNITED STATES OF AMERICA)	
United States Department of Justice)	
Antitrust Division)	
450 Fifth Street, N.W., Suite 8700)	
Washington, D.C. 20530)	
)	
Plaintiff)	
)	
v.)	
)	
UNITED TECHNOLOGIES CORPORATION)	
United Technologies Building)	
Hartford, Connecticut 06101)	
)	
and)	
)	
GOODRICH CORPORATION)	
Four Coliseum Centre)	
2730 West Tyvola Road)	
Charlotte, North Carolina 28217)	
)	
Defendants)	

COMPLAINT

The United States of America (“United States”), acting under the direction of the Attorney General of the United States, brings this civil antitrust action against Defendants United Technologies Corporation (“UTC”) and Goodrich Corporation (“Goodrich”) to enjoin UTC’s proposed acquisition of Goodrich. The United States complains and alleges as follows:

I. NATURE OF THE ACTION

1. Pursuant to an asset purchase agreement dated September 21, 2011, UTC proposes to acquire all the shares of Goodrich. The transaction is valued at approximately \$18.4 billion. If consummated, the acquisition would constitute the largest aerospace acquisition in history.

2. UTC and Goodrich are the only two significant suppliers in the worldwide market for large main engine generators. The proposed acquisition would eliminate competition between UTC and Goodrich for large main engine generators.

3. UTC is one of only a few producers of aircraft turbine engines in the world. Either on its own or through a partnership, Goodrich produces and services engine control systems, a critical component on such engines, for several of UTC's leading competitors. Following the acquisition, UTC could disadvantage its engine competitors by withholding or delaying delivery, increasing prices, or reducing the quality of its servicing of engine control systems for competitors' engines. UTC also could exploit confidential information gained through its work on those engine control systems to disadvantage its competitors. The proposed acquisition therefore is likely to reduce competition substantially for aircraft turbine engines.

4. UTC and a joint venture in which Goodrich has a fifty percent share are two of the world's three leading producers of engine control systems for large aircraft turbine engines. The proposed acquisition likely would reduce competition substantially for engine control systems for large aircraft turbine engines.

5. As a result, the proposed acquisition likely would substantially lessen competition in the worldwide markets for the development, manufacture, and sale of large main engine generators, aircraft turbine engines, and engine control systems for large aircraft turbine engines, in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18.

II. THE DEFENDANTS

6. UTC is incorporated in Delaware and has its headquarters in Hartford, Connecticut. UTC produces a wide range of products for the aerospace industry and other industries, including, among other products, aircraft generators, aircraft engine control systems

and components, aircraft engines, and helicopters. UTC's main aerospace divisions are Pratt & Whitney, Hamilton Sundstrand, and Sikorsky. In 2010, UTC had revenues of approximately \$54 billion.

7. Goodrich is incorporated in New York and has its headquarters in Charlotte, North Carolina. Goodrich manufactures a variety of products for the aerospace industry, including, among other products, aircraft generators, aircraft engine control systems and components, landing gear, and actuation systems. In 2010, Goodrich had revenues of approximately \$7.2 billion. In 2001, Goodrich began a joint venture with Thales Avionics Electrical Systems SA called TRW-Thales Aerolec SAS ("Aerolec") for the purpose of collaborating on the development of variable-frequency main engine generators for large aircraft. References to Goodrich throughout the remainder of this Complaint also refer to Aerolec.

III. JURISDICTION AND VENUE

8. The United States brings this action under Section 15 of the Clayton Act, 15 U.S.C. §§ 4 and 25, as amended, to prevent and restrain Defendants from violating Section 7 of the Clayton Act, 15 U.S.C. § 18.

9. Defendants develop, manufacture, and sell aircraft systems and components and other products in the flow of interstate commerce. Defendants' activities in the development, manufacture, and sale of these products substantially affect interstate commerce. This Court has subject matter jurisdiction over this action pursuant to Section 15 of the Clayton Act, 15 U.S.C. § 25, and 28 U.S.C. §§ 1331, 1337(a), and 1345.

10. Defendants have consented to venue and personal jurisdiction in this judicial district. Venue is therefore proper in this District under Section 12 of the Clayton Act, 15 U.S.C. § 22, and 28 U.S.C. § 1391(c).

IV. LARGE MAIN ENGINE GENERATORS

A. Background

11. An electrical generator is a device that converts mechanical energy into electrical energy. The main engine of an aircraft generates mechanical energy. The main engine has a generator, which through electromagnetic induction converts the mechanical energy created by the engine to electrical energy.

12. The generator is responsible for generating power for all the in-flight systems that run on electricity, including pumping breathable air into the fuselage, operating the lights, and running the navigation and communication equipment in the cockpit.

13. To operate, the generator depends on the motion of the main engine. As the engine turns, it rotates a shaft leading to the generator, which generates electric power through electromagnetic induction.. The outgoing electricity flows into the primary electrical distribution system, which routes it through the aircraft to the lighting system, environmental control systems, and other systems requiring electric power.

14. Aircraft power generation is a complicated process because aircraft engines change speed, according to the rate of acceleration or deceleration, the density of the air through which the aircraft is flying, and the angle of flight. Such variations require the generator to smooth out the peaks and valleys of propulsion to deliver the consistent power required by the aircraft's electrical systems.

15. The specifications of the main engine generator vary based on the size of the aircraft on which it is used. That aircraft size – large or small – determines the amount of power required from the generator. Large aircraft include primarily aircraft that seat 100 passengers or more, such as commercial aircraft like the Airbus A380 and A320 or the Boeing 777 and 737.

Aircraft that do not qualify as large aircraft include regional jets, business jets, and helicopters, which are smaller and have considerably fewer seats than large aircraft.

16. Electrical systems on large aircraft are significantly different from those used on smaller aircraft. Large aircraft require more power than smaller aircraft. In addition, large aircraft and smaller aircraft have substantial differences in terms of power rating, voltage, speed, and cooling system. Further, large aircraft systematically use alternating current (“AC”), but smaller aircraft can use either AC or direct current (“DC”). AC generators can produce variable frequency or constant frequency electrical power. The generators that are able to power large aircraft generally have outputs above approximately 75 thousand volt-amps (“Kva”). Hereinafter, main engine generators with outputs of 75Kva or more will be referred to as “large main engine generators.”

17. Designing a large main engine generator is generally more difficult than designing a main engine generator for a smaller aircraft because of the need to operate large main engine generators efficiently at high rotation speeds. Design engineering staff must be experienced with the impact of operating at higher speeds, which requires a more complex cooling system, more complex controls, and mechanically sizing the generator to fit the plane.

18. The friction created by the heavier rotor operating at faster speeds in a large main engine generator also requires a more complex cooling system. Main engine generators for smaller aircraft, generating 30 to 45Kva or less, are cooled sufficiently by air circulated within the generator chamber. Large main engine generators, however, require a system of tubing and gears to deliver mists of oil around the rotor to avoid over-heating. Oil-cooling systems are more complex and challenging to design.

19. The need for a heavier rotor and a more complex cooling system also makes it difficult to minimize the size and weight of a generator. Therefore, large main engine generators are designed to more demanding specifications than main engine generators for smaller aircraft.

20. Using two generators designed for smaller aircraft in place of one large main engine generator with the same total output would weigh more, take more space, require more connections to the electrical distribution system and the gearbox, and would be more costly. Weight and space, in particular, are important factors in generator selection and likely would dissuade a customer from approving such a design.

21. A generator used in an auxiliary power unit (“APU”) cannot be used in place of a main engine generator. APU generators are designed to perform a function different from main engine generators and, therefore, differ in mechanical design, electrical design, and cooling technique.

B. Relevant Markets

1. Product Market

22. Large main engine generators have specific applications, for which other products cannot be employed. An aircraft needs a main engine generator and cannot operate without one. In addition, main engine generators for use on smaller aircraft, such as regional or business jets, cannot be used in large aircraft because they do not provide sufficient output to power the aircraft and have other different specifications. Further, generators for other parts of an aircraft, such as the APU, cannot be used on a main engine for a large aircraft because they do not have the same performance characteristics as main engine generators.

23. A small but significant increase in the price of large main engine generators would not cause customers of those generators to substitute a smaller generator, a generator for

an APU, or any other product, or to reduce purchases of large main engine generators, in volumes sufficient to make such a price increase unprofitable. Accordingly, the development, manufacture, and sale of large main engine generators is a line of commerce and relevant market within the meaning of Section 7 of the Clayton Act.

2. Geographic Market

24. Aircraft manufacturers purchase large main engine generators primarily from companies located in the United States or Europe. However, suppliers typically offer a worldwide organization to support the provision of maintenance and repair services. Customers do not consider transportation costs, a small proportion of the cost of the finished aircraft, to be a significant cost driver.

25. Accordingly, the world is the relevant geographic market within the meaning of Section 7 of the Clayton Act.

C. Anticompetitive Effects of the Proposed Acquisition

26. UTC's proposed acquisition of Goodrich likely would lessen competition substantially in the market for the development, manufacture, and sale of large main engine generators. UTC and Goodrich are the only significant competitors for large main engine generators. For the past twelve years, either UTC or Goodrich has won every competition for large main engine generators. Indeed, UTC and Goodrich were the top two bidders in almost every one of those competitions. UTC and Goodrich have been each other's closest competitor based on technical and commercial considerations.

27. UTC's and Goodrich's bidding behaviors often have been constrained by the possibility of losing sales of large main engine generators to the other. Each firm has often

considered the other company's offering when planning bids and research and development activities.

28. Customers have benefited from the competition between UTC and Goodrich for sales of large main engine generators by receiving lower prices, more favorable contractual terms, more innovative products, and shorter delivery times. The combination of UTC and Goodrich would eliminate this competition and its future benefits to customers. Post-acquisition, UTC likely would have the incentive and the ability profitably to increase prices and reduce innovation.

29. UTC and Goodrich invest significantly to remain the two leading suppliers of large main engine generators in the future, and customers expect them to remain the leading suppliers. Future product development for large main engine generators likely would benefit from vigorous innovation competition between UTC and Goodrich.

30. Other companies that have some capability to develop large main engine generators are not close competitors to UTC and Goodrich. For example, no other company has an installed base of large main engine generators. Any other firm would need substantial time and expense to achieve UTC's or Goodrich's record of experience, flight time, and reliability. UTC's and Goodrich's installed base of large main engine generators also provides them the ability to develop new large main engine generators more efficiently and at a lower cost than other companies.

31. Companies that manufacture main engine generators for small aircraft do not compete effectively with UTC and Goodrich for large main engine generators because those companies' experiences with main engine generators for smaller aircraft do not provide them the ability to design and manufacture large main engine generators, which are more complicated

products. Similarly, companies that make generators for APUs do not compete effectively with UTC and Goodrich for large main engine generators because those companies' experiences with APU generators do not provide them the ability to design and manufacture large main engine generators, which again are more complicated products.

32. The proposed acquisition, therefore, likely would substantially lessen competition for the development, manufacture, and sale of large main engine generators. This likely would lead to higher prices, less favorable contractual terms, and less innovation in violation of Section 7 of the Clayton Act.

D. Difficulty of Entry

33. Sufficient, timely entry of additional competitors into the market for large main engine generators is unlikely. Therefore, entry or the threat of entry into this market would not prevent the harm to competition caused by the elimination of Goodrich as a supplier of these products.

34. Firms attempting to enter into the market for the development, manufacture, and sale of large main engine generators face several barriers to entry. Main engine generators perform critical functions on the aircraft and likely will be used throughout the life of the aircraft program, which may be twenty or thirty years. As a result, aircraft manufacturers are reluctant to purchase a product from a supplier not already known for its expertise in large main engine generators. A manufacturer must be able to demonstrate that its large main engine generator meets the necessary specifications and need for reliability. While some companies may have demonstrated experience in other types of generators, such experience is not considered by customers to be as relevant as experience specifically in large main generators.

35. UTC and Goodrich emphasize to customers their prior experience in large main engine generators to demonstrate reliability. Moreover, this experience allows them to develop a new large main engine generator at an initial development cost lower than that of companies that do not already have similar generators in operation. They also are able to demonstrate the technical and financial ability successfully to manage production, aftermarket service, and warranty work for large main engine generators, which companies trying to enter this market would not be able to do.

36. Developing a large main engine generator is technically difficult. Manufacturers of main engine generators for smaller aircraft or generators for other parts of the aircraft, such as APUs, face significant technical hurdles in designing and developing large main engine generators. Large main engine generators present unique technical challenges relating to the preservation of power quality at speeds much higher than those reached in main engine generators for smaller aircraft and generators for APUs. Large main engine generators also generate higher current levels than other generators, and require an oil cooling system. The manufacturer of main engine generators for smaller aircraft and APU generators cannot design and produce a large main engine generator simply by making a main engine generator for a smaller aircraft or an APU generator proportionately larger, but must instead completely redesign the generator.

37. Further, substantial time and significant financial investment would be required for a company to design and develop a large main engine generator. Even companies that already make other types of generators, or that already are attempting to develop a large main engine generator, would require up to five years or more and an investment of over \$50 million to develop a product that is competitive with those offered by UTC and Goodrich.

38. As a result of these barriers, entry into the market for large main engine generators would not be timely, likely, or sufficient to defeat the substantial lessening of competition that likely would result from UTC's acquisition of Goodrich.

V. AIRCRAFT TURBINE ENGINES

A. Background

39. Most modern commercial, business, and military aircraft are powered by turbine engines. These engines operate by burning a fuel-and-air mixture in a combustion chamber, with the resulting combustion products turning a propeller blade on a turboprop engine, a rotor shaft on a turboshaft engine, or a fan in front of a turbofan engine.

40. Turbofan engines power most commercial transport aircraft, business jets, and many military aircraft. Generally, large commercial aircraft, regional jets, and military aircraft use the most powerful turbofan engines, while business jets use turbofan engines of lower power. The power delivered by a turbofan engine is measured in terms of pounds of thrust ("pounds thrust"), and such engines are generally categorized by their thrust class.

41. Turboprop engines primarily are used to power smaller aircraft, such as commuter aircraft. Turboshaft engines power helicopters. The power delivered by turboprop and turboshaft engines is measured in terms of shaft horsepower (shp).

42. Due to their complexity and the degree of expertise and skill required for their design, development and production, few companies produce aircraft turbine engines.

43. Aircraft turbine engines typically continue in service for decades and require regular maintenance, repair, and overhaul. When selecting an engine, customers take into account the difficulty and cost of servicing the engine. Engines that require more frequent

servicing or are otherwise more difficult or costly to own and operate are less attractive to customers and therefore less competitive.

44. There are only three main producers of aircraft turbine engines of greater than 10,000 pounds thrust. (Hereinafter the term “large aircraft turbine engines” will refer to engines of this thrust range.) UTC, through its Pratt & Whitney subsidiary, and Rolls-Royce Group plc (“Rolls-Royce”) are two of these three producers. UTC manufactures turbine engines of up to 90,000 pounds thrust, while Rolls-Royce manufactures turbine engines of up to 97,000 pounds thrust.

45. There are only a few producers of aircraft turbine engines of 10,000 pounds thrust or less. (Hereinafter the term “small aircraft turbine engines” will refer to engines of this thrust range.) UTC, through its Pratt & Whitney subsidiary, is one of these producers.

46. It is critical that fuel be fed into aircraft turbine engines in a precise manner, so that the engine responds to the pilot’s instructions in the most efficient manner possible. The system that accomplishes this is the engine control system, or ECS. The core of the ECS is a computer, usually called an electronic engine control, or EEC, that receives information from multiple sensors in the engine and from the pilot’s controls, and calculates the amount of fuel to be sent to the engine. The ECS also includes the engine’s main fuel pump and a fuel metering unit, or FMU, which controls the amount of fuel coming into the engine from the main fuel pump.

47. In virtually all modern aircraft turbine engines, the EEC within the ECS is a full-authority digital engine control, or FADEC. The FADEC consists of hardware and two types of software: the operating system and the application software. The operating system is provided by

the FADEC supplier. The application software contains sensitive performance data relating to the particular engine and is usually provided by the engine manufacturer.

48. An ECS, including the FADEC, is designed and developed to meet the specific performance requirements for the particular engine on which it will be installed. As a result, the ECS supplier has insight into the design and cost of not only its ECS, but also the customer's engine. Some ECS suppliers also provide the application software on the FADEC. Such suppliers have access to competitively sensitive confidential business information about the fuel efficiency and performance principles around which the customer's engine is designed.

49. In 2008, Goodrich and Rolls-Royce formed Aero Engine Controls (AEC), a joint venture to produce ECSs. The AEC joint venture agreement requires Rolls-Royce to purchase all of its ECSs for engines of over 4000 pounds thrust or 2000 shp from AEC. Therefore, there are no alternative suppliers of ECSs for Rolls-Royce large aircraft turbine engines.

50. The AEC joint venture agreement gives Goodrich the exclusive right to provide replacement parts and undertake maintenance, repair and overhaul of ECSs for Rolls-Royce large aircraft turbine engines. Because the volume of commerce for aftermarket service of any given ECS is quite small, there are no secondary suppliers for ECS replacement parts or service. Aftermarket parts and service for ECSs must be provided by the original ECS manufacturer or a reseller designated by that manufacturer. Therefore, it would not be possible for purchasers of these Rolls-Royce engines to obtain parts or service for these ECSs from any supplier other than Goodrich.

B. Relevant Markets

1. Product Markets

a. Aircraft Turbine Engines

51. To a large extent, each aircraft platform is limited in the type and size of engine with which it may be powered. The choice of a turbofan, turboprop or turboshaft engine is dictated by aircraft type, range and speed, and is specified by the manufacturer. The engine must provide the amount of power needed for that particular aircraft to perform properly and safely, while at the same time being as light as possible. Thus, only a limited range of engine sizes is considered for any particular aircraft.

52. For any given aircraft, a small but significant increase in the price of an aircraft turbine engine of the required type and thrust would not cause sufficient purchases of such engines to be shifted to engines of a different type or significantly higher or lower thrust so as to make such a price increase unprofitable. Accordingly, the development, manufacture, and sale of the turbine engine required for each type of aircraft is a line of commerce and a relevant product market within the meaning of Section 7 of the Clayton Act.

53. Although the engine required for each such aircraft thus may be deemed a separate product market, in each such market there are few competitors.

54. The proposed acquisition of Goodrich by UTC would affect competition in each large aircraft turbine engine market in the same manner. It is therefore appropriate to aggregate large aircraft turbine engine markets for purposes of analyzing the effects of the acquisition.

55. The proposed acquisition of Goodrich by UTC would affect competition in each small aircraft turbine engine market in the same manner. It is therefore appropriate to aggregate small aircraft turbine engine markets for purposes of analyzing the effects of the acquisition.

b. ECSs for Aircraft Turbine Engines

56. All aircraft turbine engines require an ECS in order to operate properly. No aircraft engine can be sold or operated without an ECS. There are no other products that perform the functions of an ECS in receiving and analyzing data from sensors and pilot controls, calculating the optimal flow rate of fuel into the engine combustion chamber, and feeding the proper amount of fuel into the engine combustion chamber.

57. Each ECS is designed to work on a specific engine, and one ECS cannot be substituted for an ECS on another engine. Therefore, a small but significant increase in the price of the ECS designed for a particular engine would not cause enough purchases to be shifted to a different ECS so as to make such a price increase unprofitable. Accordingly, the development, manufacture, sale, and aftermarket service of the ECS for each aircraft turbine engine is a line of commerce and relevant product market within the meaning of Section 7 of the Clayton Act.

58. Although the ECS required for each particular engine thus may be deemed a separate product market, the AEC joint venture agreement requires Rolls-Royce to purchase all ECSs for large aircraft turbine engines from AEC and grants exclusive aftermarket rights to such ECSs to Goodrich. Thus the proposed acquisition would affect competition in each such market in the same manner. It is therefore appropriate to aggregate the markets for ECSs for large aircraft turbine engines for purposes of analyzing the effects of the acquisition.

59. The proposed acquisition would have the same effect in each market for ECSs for small aircraft turbine engines. It is therefore appropriate to aggregate the markets for ECSs for small aircraft turbine engines for purposes of analyzing the effects of the acquisition.

2. Geographic Market

60. Aircraft manufacturers purchase aircraft turbine engines and the ECSs for those engines primarily from companies located in the United States or Europe. However, suppliers typically offer a worldwide organization to support the provision of maintenance and repair services. Customers do not consider transportation costs, a small proportion of the cost of the finished aircraft, to be a significant cost driver.

61. Accordingly, the world is the relevant geographic market within the meaning of Section 7 of the Clayton Act.

C. Anticompetitive Effects of the Proposed Acquisition

1. Large Aircraft Turbine Engines

62. As discussed in paragraph 43 above, there are only three primary competitors in the markets for the development, manufacture, and sale of large aircraft turbine engines. UTC, through its Pratt & Whitney subsidiary, and Rolls-Royce are two of those competitors. Goodrich is a partner in AEC, from which Rolls-Royce must obtain its ECSs for most such engines. If UTC were to purchase Goodrich, and thus Goodrich's share of AEC, UTC would be both a producer of large aircraft turbine engines and the sole-source supplier of ECSs to one of its leading engine competitors.

63. After the acquisition UTC, through its position as a partner in the AEC joint venture, would have the incentive and ability to cause AEC to withhold or delay delivery of ECSs to its competitor, Rolls-Royce, resulting in the inability of Rolls-Royce to deliver engines on the schedule required by customers.

64. In addition, after the acquisition UTC, through its position as the exclusive supplier of aftermarket parts and services for ECSs on Rolls-Royce large aircraft turbine engines,

would have the incentive and ability to raise the costs of such parts and services, or to lower the availability of such parts and services, making Rolls-Royce a less reliable supplier of large aircraft large turbine engines.

65. Such strategies to raise Rolls-Royce's costs and reduce its reliability would be profitable to UTC post-merger because the sale of large aircraft turbine engines provides much more revenue and profit than the sale of ECSs or the aftermarket service of ECSs for those engines. Therefore, if UTC were able to gain additional engine sales by causing AEC to withhold or delay delivery of ECSs for Rolls-Royce engines, or by increasing the cost or difficulty of obtaining aftermarket service on such ECSs, the additional engine sales would result in considerably more revenue and profit to UTC than the revenue and profit lost from any decrease in sales of or aftermarket service on such ECSs.

66. These actions by UTC likely would harm purchasers of large aircraft turbine engines because UTC and Rolls-Royce have been, and likely will continue to be, in some competitions the two best-positioned suppliers of large aircraft turbine engines. By making Rolls-Royce unable to deliver engines or by raising its costs, UTC may substantially affect competition and gain the ability to raise prices or reduce quality.

67. In addition, because AEC produces the ECSs for Rolls-Royce engines, AEC has accurate information concerning the cost of the ECS and each of the ECS components used on each Rolls-Royce engine covered by the AEC agreement. Moreover, because AEC provides the application software for the FADECs for these Rolls-Royce engines, it has access to competitively-sensitive confidential business information concerning the engine itself, including the fuel efficiency and performance principles around which each engine is designed.

68. Following the acquisition of Goodrich and its share of AEC, UTC would have the incentive and ability to use this information to its advantage in bidding on large aircraft turbine engines. For example, such information would reveal to UTC when it could offer higher pricing or less innovative solutions without risk of losing a large aircraft turbine engine sale.

69. Therefore, UTC's acquisition of Goodrich would give UTC both the ability and the incentive to reduce the competitiveness of Rolls-Royce in the supply of large aircraft turbine engines. If UTC were to reduce the competitiveness of Rolls-Royce in the markets for these engines, customers for those engines would have significantly fewer choices, and competition thus would be lessened substantially.

2. Small Aircraft Turbine Engines

70. As discussed in paragraph 44 above, UTC, through its Pratt & Whitney subsidiary, is one of a small number of significant competitors in the markets for the development, manufacture, and sale of small aircraft turbine engines. Several of UTC's competitors purchase the ECSs for certain of their small aircraft turbine engines from Goodrich. Therefore, if UTC were to purchase Goodrich, UTC would be both a producer of small aircraft turbine engines and a supplier of ECSs to its competitors.

71. At least three years are required to design and develop an ECS for a small aircraft turbine engine. Therefore, if an engine manufacturer must replace the supplier of the ECS on a specific engine, at least three years will pass before the engine manufacturer can deliver an engine with a replacement ECS. Aircraft manufacturers often demand delivery of an engine in less than three years.

72. If, after the acquisition, UTC were to withhold or delay delivery of Goodrich ECSs to companies that compete with UTC for the design, development, manufacture, and sale

of small aircraft turbine engines, those companies might be unable to deliver engines on the schedule required by their customers. Such customers likely would have to turn to a different engine supplier.

73. In such circumstances, UTC might be the best positioned alternative engine supplier. As a result, customers that would otherwise choose a competing engine could be forced to purchase an engine from UTC.

74. The sale of small aircraft turbine engines provides much more revenue and profit than the sale of ECSs for those engines. Therefore, if UTC were able to gain additional engine sales by withholding or delaying delivery of ECSs to its engine competitors, the additional engine sales would result in considerably more revenue and profit to UTC than the revenue and profit lost from any decrease in sales of such ECSs.

75. UTC's acquisition of Goodrich therefore would give UTC both the ability and the incentive to make its competitors unable to compete effectively to supply small aircraft turbine engines. If UTC were to make its competitors unable to compete effectively in the development, manufacture, and sale of small aircraft turbine engines, customers for those engines would have significantly fewer choices, and competition would be lessened substantially.

D. Difficulty of Entry

76. Sufficient, timely entry of additional competitors into the markets for aircraft turbine engines is unlikely to prevent the harm to competition in the markets for aircraft turbine engines that is likely to occur as a result of the proposed acquisition.

77. Entry of any new competitor into the development, manufacture, and sale of aircraft turbine engines is unlikely and cannot happen in a time period that would prevent significant competitive harm. The primary purchasers of aircraft turbine engines are aircraft

manufacturers, of which there are very few in the world. Aircraft manufacturers are extremely hesitant to purchase components from unproven sources, particularly such major components as engines. A firm seeking to enter this business would need many years and an enormous financial investment to design and develop a new aircraft turbine engine. No firm has successfully entered this business in decades.

78. Such entry is unlikely to occur in a timeframe sufficient to prevent competitive harm. Engine purchasers typically expect delivery of the first engine for a new aircraft from one to five years after contract award. A new entrant into any market for aircraft turbine engines, even a firm already manufacturing other aircraft turbine engines, would require much more time to develop and market a new engine.

79. As a result of these barriers, entry into the markets for aircraft turbine engines would not be timely, likely, or sufficient to defeat the substantial lessening of competition that is likely to result from UTC's acquisition of Goodrich.

VI. ENGINE CONTROL SYSTEMS FOR LARGE AIRCRAFT TURBINE ENGINES

A. Background

80. The ECS in a large aircraft turbine engine is a major determinant of key engine performance parameters including fuel economy, safe operation, and thrust in different situations. In order to maximize engine performance, the ECS must be closely integrated with the engine during both the design stage and the assembly process. Changes in an engine design can necessitate changes in an ECS design, and vice versa.

81. As a result, large aircraft turbine engines and the ECSs for those engines are not sold separately to engine purchasers. It would not be practical for even the most sophisticated

engine purchasers to integrate an ECS and an engine. All large aircraft turbine engines are sold with an ECS installed by the ECS producer and the engine manufacturer.

82. In large part because of the highly integrated nature of engines and ECSs, each of the three major producers of large aircraft turbine engines has a preferred supplier for the ECSs used on its engines. Each engine manufacturer purchases the great majority of the ECSs used on its engines from its preferred supplier.

83. Because of these preferred supplier relationships, there are only three significant suppliers of ECSs for large aircraft turbine engines, one for each engine producer. UTC and AEC, the Goodrich-Rolls-Royce joint venture, are two of the three suppliers. UTC, through its Hamilton Sundstrand subsidiary, supplies the ECSs used on most of its own engines. AEC supplies the ECSs used on most Rolls-Royce engines.

B. Relevant Markets

1. Product Market

84. As discussed in paragraphs 56 to 58 above, the development, manufacture, sale, and aftermarket service of the ECS for large aircraft turbine engines is a line of commerce and relevant product market within the meaning of Section 7 of the Clayton Act.

2. Geographic Market

85. Aircraft manufacturers purchase ECSs for large aircraft turbine engines primarily from companies located in the United States or Europe. However, suppliers typically offer a worldwide organization to support the provision of maintenance and repair services. ECS customers do not consider transportation costs, a small proportion of the cost of the finished aircraft, to be a significant cost driver.

86. Accordingly, the world is the relevant geographic market within the meaning of Section 7 of the Clayton Act.

C. Anticompetitive Effects of the Proposed Transaction

87. UTC's proposed acquisition of Goodrich likely would lessen competition substantially in the market for ECSs for large aircraft turbine engines. UTC and AEC are two of the three producers of such ECSs. If UTC were to purchase Goodrich and thus Goodrich's share of AEC, UTC would control fifty percent of one of its two leading competitors for such ECSs.

88. Although an ECS for a large aircraft turbine engine is generally purchased by an engine builder from its preferred supplier, independent source selections can and do take place. For example, an aircraft manufacturer may purchase a replacement ECS from an ECS manufacturer other than its preferred supplier to upgrade the ECS on an engine already in service. This occurs when an existing ECS becomes difficult to repair due to parts obsolescence issues. In addition, engine manufacturers occasionally form teams to compete for new large aircraft turbine engine projects. In either of these situations, an ECS supplier may be selected by competition rather than on the basis of an existing preferred supplier arrangement. After the acquisition UTC, through its position as a partner in the AEC joint venture, would have the incentive and ability to impede AEC's pursuit of such projects in competition with UTC. Competition for ECSs for large aircraft turbine engines thus would be lessened substantially.

89. UTC, through its Pratt & Whitney subsidiary, and Rolls-Royce are two of the world's three primary manufacturers of large aircraft turbine engines. The companies conduct independent work into the research, development and design of new ECSs for such engines, UTC through its Hamilton Sundstrand subsidiary and Rolls-Royce through AEC. After UTC acquires Goodrich, UTC and Rolls-Royce would share control of AEC, and UTC has explored

using AEC as a vehicle to combine its ECS business with that of Rolls-Royce, to share intellectual property and research and development results, and to eliminate some product lines, rather than competing with Rolls-Royce to independently develop innovative and cost-effective ECS solutions. Competition for ECSs for large aircraft turbine engines thus would be lessened substantially, as engine customers would be offered two engines from UTC and Rolls-Royce, but only a single ECS. This loss of competition would result in less innovative and cost-effective ECSs for large aircraft turbine engines.

D. Difficulty of Entry

90. Sufficient, timely entry of additional competitors into the market for ECSs for large aircraft turbine engines is unlikely. Therefore, entry or the threat of entry into this market would not prevent the harm to competition caused by UTC's acquisition of Goodrich and its share of AEC.

91. A firm seeking to enter this market would need substantial time and a significant financial investment to design and develop a new ECS for a large aircraft turbine engine. Even those firms that produce ECSs for smaller engines would need at least five years and an investment of \$50 million or more to develop an ECS for a large aircraft turbine engine that is competitive with those produced today by UTC and AEC.

92. A firm attempting to enter this market would be unlikely to obtain sufficient sales to be economically viable. Because most of these products are purchased by the three primary engine manufacturers from their existing preferred suppliers, a new entrant would have few opportunities to recover the considerable investment required to develop a new ECS for large aircraft turbine engines. Independent competitions are unlikely to occur with sufficient frequency to permit an entrant to recover its costs.

93. As a result of these barriers, entry into the market for ECSs for large aircraft turbine engines would not be timely, likely, or sufficient to defeat the substantial lessening of competition that likely would result from UTC's acquisition of Goodrich.

VII. VIOLATIONS ALLEGED

94. UTC's proposed acquisition of Goodrich likely would lessen competition substantially in the development, manufacture, and sale of large main engine generators, aircraft turbine engines, and engine control systems for large aircraft turbine engines, in violation of Section 7 of the Clayton Act, 15 U.S.C. § 18.

95. Unless enjoined, the proposed acquisition likely would have the following anticompetitive effects relating to large main engine generators, among others:

- (a) actual and potential competition between UTC and Goodrich would be eliminated;
- (b) competition likely would be substantially lessened;
- (c) prices likely would increase, contractual terms likely would be less favorable to the customers, and innovation likely would decrease.

96. Unless enjoined, the proposed acquisition likely would have the following anticompetitive effects relating to aircraft turbine engines, among others:

- (a) competition likely would be substantially lessened;
- (b) prices would likely increase, contractual terms likely would be less favorable to the customers, and innovation likely would decrease.

97. Unless enjoined, the proposed acquisition likely would have the following anticompetitive effects relating to ECSs for large aircraft turbine engines, among others:

(a) actual and potential competition between UTC and Goodrich would be eliminated;

(b) competition likely would be substantially lessened;

(c) prices would likely increase, contractual terms likely would be less favorable to the customers, and innovation likely would decrease.

VIII. REQUESTED RELIEF

98. The United States requests that this Court:

(a) adjudge and decree that UTC's acquisition of Goodrich would be unlawful and violate Section 7 of the Clayton Act, 15 U.S.C. § 18;

(b) preliminarily and permanently enjoin and restrain Defendants and all persons acting on their behalf from consummating the proposed acquisition of Goodrich by UTC, or from entering into or carrying out any other contract, agreement, plan, or understanding, the effect of which would be to combine UTC with Goodrich;

(c) award the United States its costs for this action; and

(d) award the United States such other and further relief as the Court deems just and proper.

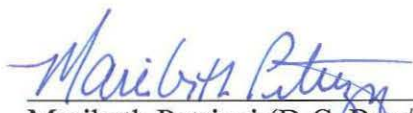
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Dated: July 26, 2012