EN

Case No COMP/M.4561 - GE / SMITHS AEROSPACE

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REGULATION (EC) No 139/2004
MERGER PROCEDURE

Article 6(1)(b) NON-OPPOSITION
Date: 23/04/2007

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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 23/04/2007

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PUBLIC VERSION

MERGER PROCEDURE
ARTICLE 6(1)(b) DECISION

To the notifying party

Dear Sir/Madam,

Subject: Case No COMP/M.4561 – GE / SMITHS AEROSPACE
Notification of 14/03/2007 pursuant to Article 4 of Council Regulation No 139/2004[1]

1. On 14/03/2007, the Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 by which the undertaking General Electric Company ("GE", United States of America) acquires within the meaning of Article 3(1)(b) of the Council Regulation control of the whole of the aerospace division of Smiths Group plc ("Smiths Aerospace", United Kingdom) by way of purchase of shares.

2. After examination of the notification, the Commission has concluded that the notified operation falls within the scope of Council Regulation (EEC) No 139/2004 and does not raise serious doubts as to its compatibility with the common market and with the EEA Agreement.

I. THE PARTIES AND THE TRANSACTION

3. GE is a diversified industrial corporation which is active in numerous fields, including manufacturing, technology and services. GE is active in aviation through its subsidiary GE Infrastructure. Other GE businesses are GE Commercial Finance (insurance, loans, etc.), GE Healthcare, GE Industrial (e.g. appliances and lighting), GE Money (credit services), and NBC Universal.

[1] OJ L 24, 29.1.2004 p. 1.

4. Smiths Aerospace is a division of the British company Smiths Group plc. It supplies digital, electrical power and mechanical system products and engine components for commercial and military aircraft and associated customer services.

5. On 14 January 2007, GE and Smiths Group plc entered into a Share Purchase Agreement under which GE will acquire sole control of Smiths Aerospace. The operation therefore constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

II. COMMUNITY DIMENSION

6. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5,000 million[2] (GE: EUR 130,100 million; Smiths Aerospace: EUR 1,957 million). Each of them have a Community-wide turnover in excess of EUR 250 million (GE: […]; Smiths Aerospace: […]), but they do not achieve more than two-thirds of their aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has a Community dimension.

III. COMPETITIVE ASSESSMENT

7. The proposed transaction leads to limited horizontal overlaps in aerostructures[3], aircraft electrical power generation[4], embedded computer products[5], and video concentrators/multiplexers for aircraft[6] but does not lead to any horizontally affected markets under any market definition.

8. However, as GE is a leading supplier of jet engines as well as a manufacturer of thrust reversers whereas Smiths Aerospace is present upstream, the Commission has examined whether the transaction would give rise to vertical foreclosure issues as regards, respectively, components for aircraft engines (section A), research for the purpose of developing a new engine concept (section B) as well as in the field of thrust reversion (section C). Conglomerate issues are also examined (section D).

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2 Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission Notice on the calculation of turnover (OJ C66, 2.3.1998, p25).

3 Composite, machined, and sheet metal component structures for aircraft such as fuselage, tail, wings, nacelles, doors, and windows. On the basis of estimates based on the Counterpoint "Aerostructures 2007", GE (Middle River) and Smiths Aerospace's combined share would be [0-5%], on the basis of either a wide aearostructures market or of individual product categories (wing structures, empennage and other nacelle structures).

4 If one market for both DC and AC generators is considered, GE (APC) and Smiths Aerospace's combined share would be [0-5%] (Source: parties' estimates based on Frost § Sullivan Commercial § Military Aircraft Electrical Power Systems Market, Overview 2001-2007), whereas there is no overlap if each type of generator is considered as a distinct market).

5 GE (GE Fanuc) and Smiths Aerospace's combined share is [0-5%] (Source: parties' estimates based on Venture Development Corporation Report "Embedded costs system in military, aerospace and defence applications", june 2006)

6 GE (GE Security) has no presence in the aerospace sector and Smiths Aerospace has very limited activities. On a hypothetical market for video concentrators/multiplexers, the parties combined share is [0-5%], with Smiths' overlap being less than 1% (Source: parties' estimates based on IMS Research, World market for CCTV and video surveillance equipment 2006).

A. Aircraft Engines and Components for Aircraft Engines

9. The principal vertical relationship resulting from this transaction is between GE's aircraft engine business (downstream) and Smiths' Aerospace aircraft engine component business (upstream).

1. Aircraft engines

Relevant markets

10. In accordance with its previous practice[7], the Commission considers that the markets for jet engines should be defined according to the aircraft's mission profile. Key distinguishing features include the difference in customer groups, the difference in aircraft operating costs and the different performance requirements of the engines, necessitated by the weight and range of the type of the aircraft. On that basis, the following four distinct jet engine markets must be distinguished:

    - jet engines for large commercial aircraft (> 100 passengers, range of 2000 to 8000 nautical miles), which include narrow-body/single-aisle aircraft and wide-body/double-aisle aircraft ("LCA");

    - jet engines for large regional aircraft (> 70 passengers, range up to 2000 nautical miles) ("LRA");

    - jet engines for small regional aircraft (30-50 passengers, range up to 2000 nautical miles) ("SRA");

    - jet engines for corporate aircraft.

11. These markets are worldwide.

Market position of GE

12. As the markets for jet engines consist in bidding markets, several ways to evaluate market shares can be considered. In the GE/Honeywell decision, the Commission considered that the market shares should be calculated on the basis of the installed base (installed base market shares) and firm orders (engine order backlog market shares) until a given date. This includes all deliveries until a given date and orders placed but not yet delivered for in-production aircraft (as opposed to aircraft that are no longer in production).[8]

13. As regards specifically the market for LCA jet engines, GE makes direct sales on its own as well as through a joint venture (CFMI), jointly controlled with Safran. Given that GE and CFMI act as a single entity on the market with regard to their competitors and customers, and that Snecma does not supply large commercial aircraft jet engines independently of CFMI, the Commission considers that, for the

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7 Case No COMP/M.2220 – General Electric/Honeywell, decision of 3 July 2001, paragraphs 9-34.

8 See Case No COMP/M.2220 – General Electric/Honeywell, decision of 3 July 2001, paras 38-44, upheld by the CFI in this respect.

specific purpose of assessing GE's market position on this market, the sales made by the joint venture CFMI should be fully attributed to GE[9].

14. On this basis, GE held, as of 31 December 2006, an installed base market share of [60-70%] (CFMI: [40-50%]; GE: [10-20%]) and a backlog order market share of [70-80%] (CFMI: [60-70%]; GE: [10-20%]) on the market for LCA engines. The notifying party submits that these market shares are not indicative of a dominant position in particular because contracts are awarded through competitive bidding processes. However, the Commission notes that GE's market shares have not only been stable but have even increased over the last five years, both in respect of installed base and backlog orders. Although the market for jet engines is indeed to be considered as a bidding market, such a finding does not mean that such market shares are not indicative of a dominant position. Indeed, even on a bidding market, the fact of a manufacturer maintaining, or even increasing, its market share over a number of years in succession is an indication of market strength[10].

15. However, while the mere magnitude of the market shares does not suggest that the analysis of the Commission, as confirmed by the CFI in this respect, should be changed, the fact that GE holds a dominant position on the market for jet engines for LCA does not, in the present case, alter the conclusions of the competitive assessment.

16. As regards the market for LRA, GE's installed base market share (for LRAs still in production) reached [90-100%] on 31 December 2006. The notifying party nevertheless submits that, since the Commission's finding of GE's dominance on this market[11], a new joint venture engine company formed by Safran and a Russian partner, NPO Saturn, was selected in 2003 to power the new Russian Regional jet, adding a new competitor on the market, the engine backlog of which already represents [50-60%] of the market. In this respect, the Commission notes that these figures refer to engines not yet in service and therefore do not necessarily provide a reliable picture of the state of competition[12]. In any event, the finding that GE would still hold a dominant position on the market for jet engines for LRA does not, in the present case, alter the conclusions of the competitive assessment.

17. As regards GE's market position on other markets, it is far less important. On the market for small regional jets, GE has an installed base market share of [40-50%] but this market share is [less than 5%] if only in production aircrafts are considered. On the market for corporate jets, GE has a market share below 10% irrespective of the calculation methodology.

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9 See, in that respect, Case T-210/01, GE/Commission [2005], paragraphs 124-147.

10 See Case T-210/01, GE/Commission, at paragraph 151.

11 As confirmed by the CFI in Case T-210/01, at paragraphs 539-542.

12 See Case T-210/01, GE/Commission, at paragraph 168. It has to be acknowledged however that, unlike LCA, the issue of multi-sourcing is not as important in the field of LRA. The fact that the new JV has been selected to power the new Russian Regional jet could therefore be relevant for the purpose of assessing whether GE's market position is likely to be contested in the near future.

2. Components of engines

18. Smiths Aerospace is active upstream of GE's aircraft engine business, in three categories of aircraft engine components, that is, machined parts, fabrications, and ring forgings (including flash-welded and seamless ring forging).

(i) Machined parts

Relevant product markets

19. Machined parts are components used in aircraft engines, which encompass a wide variety of products (more than thirty) such as cases, disks, mounts, shafts, spools, etc.

20. To define this market, the notifying party relies on supply-side substitutability considerations. Indeed, each engine component is tailored for a particular model of engines so that there is a total lack of demand-side substitutability. The question therefore arises to what extent competitors of Smiths Aerospace are able to produce the full range of machined parts.

21. To support its argument, the notifying party explains that the same basic production processes are used for all machined parts. This is indeed illustrated by the fact that all the GE-approved suppliers for each type of machined parts typically produce a wide range of products. Moreover, it appears that, within Smiths Aerospace's production facilities, each production cell has the same range of equipment, through which hundreds of different parts are manufactured (Smiths Aerospace produces 2,000 to 3,000 different machined parts). The market investigation confirms, to some extent, that there is indeed a high level of supply-side substitutability on a wide range of components and that there exists numerous possible suppliers of each type of machined parts, although there are sometimes differences in their product portfolio[13].

22. However, the question whether each type of machined part should constitute a distinct product market and/or whether a distinction should be made according to the type of aircraft (as it appears that most of Smiths Aerospace's machined parts meet the demand of LCA manufacturers) can be left open for the purpose of the present decision as it does not change the conclusions of the competitive assessment.

Relevant geographic markets

23. The notifying party considers that the market for the supply of machined parts is worldwide. This is in tune with previous aerospace decisions[14] that dealt with the supply of goods to aircraft engine manufacturers and was confirmed by the market investigation.

Competitive assessment

24. On the worldwide market for machined parts (market size: EUR [1,000-2,000 million]), Smiths Aerospace has a [5-10%] market share. This market remains very

13 That is, not all machined parts are offered by all competitors of Smiths.

14 M.2738 GEES/Unison, M.2220 GE/Honeywell

fragmented[15]. Other market players include *inter alia* Singapore Aerospace Manufacturing ([5-10%]), Teleflex Aerospace Manufacturing ([5-10%]) and Goodrich ([5-10%]).

25. Smiths Aerospace's market share remains around 10% or below if any individual product types were considered individually and/or if the market was segmented with respect to the end application (notably for LCAs)[16]. Furthermore, as shown by GE's own sourcing policy, there exists a considerable number of companies able to supply engine manufacturers for each product type. In addition, these components can be manufactured in-house by engine manufacturers. GE submits that [50-60%] of its machined parts' needs was manufactured in-house in 2006. Engine manufacturers confirmed during the market investigation that part of their demand was also met by in-house production, in a variable but always significant proportion.

26. These factors showing that there are numerous alternatives to Smiths Aerospace, together with the fact that machined parts appear to be a low-key and low-margin business, make it unlikely that the new entity would be in a position to restrict access to machined parts that it would have otherwise supplied absent the merger (input foreclosure).

27. As regards a possible scenario of customer foreclosure giving rise to detrimental effects on the markets for jet engines, this appears to be equally unlikely given the number of Smiths Aerospace's competitors and the fact that GE today only resorts to a couple of them. Put differently, many competitors of Smiths Aerospace will remain unaffected by the proposed transaction (this is all the more true that, currently, Smiths Aerospace makes already [70-80%] of its sales of machined parts to GE). Furthermore, it has to be recalled that engine manufacturers such as Rolls-Royce and Pratt &Whitney also have in-house production capabilities.

28. In conclusion, the Commission takes the view that foreclosure effects are unlikely on the markets for machined parts and aircraft engines.

(ii) Fabrication

Relevant product markets

29. Fabrication is the term used to describe a family of constructed static components for aircraft engines. They are typically assemblies made up of machined parts, formed sheet metal, and complex castings. Again, this market encompasses a great number of products (more than 20 different types including fan cases, turbine nozzles, and front frames).

30. Akin to the case of machined parts, the notifying party explains that producers organize their facilities by production cells and that each cell can be used to perform the same production processes (principally sheet metal forming, brazing, welding, laser cutting, drilling, and heat treating). With a view to illustrating the high level of supply-side substitutability, the notifying party has produced a table where it lists all the GE-approved suppliers for each type of fabrication parts. The supply-side

15 See Counterpoint Study (2006), page 15, cited above.

16 On the hypothetitcal market of machined parts for LCAs, Smiths' market share is expected to reach [10-20%] (source: Parties' estimates).

substitutability appears less evident than for machined parts as many Smiths Aerospace's competitors have a limited portfolio of fabricated products.

31. However, the question whether each type of fabrication should be defined as a distinct market or even by reference to the end application (e.g. fabrications for LCAs), can be left open for the purpose of the present decision as it does not alter the conclusions of the competitive assessment.

Relevant geographic markets

32. Consistent with the Commission's approach in other aircraft components markets, the notifying party considers that the relevant geographic market is global. This was confirmed by the market investigation

Competitive assessment

33. On the worldwide market for fabrication parts (market size: EUR [1,000-2,000 million]), Smiths Aerospace, the most important producer of fabrication parts, would have a [10-20%] market share. As for machined parts, the market is highly fragmented and includes other market players such as Volvo ([0-10%]), Magellan Aerospace ([0-10%]) and Barnes Aerospace ([0-10%]).

34. If product types are considered individually, Smiths Aerospace's market share remains below 15% and would be only [less than 5%] if fabrications for LCA engines are considered. Furthermore, in view of the list of GE's accredited suppliers of fabrication parts, it appears that most fabrication parts can be manufactured by at least six suppliers. The only two fabrication parts (ducts and AB cases) for which it is not the case are currently solely sold by Smiths Aerospace to […]. Finally, engine producers manufacture a significant share of fabrication parts themselves. GE manufactures approximately [60-70%] of its total requirements in-house and respondents to the market investigation confirmed that they also manufacture a large share of their needs of fabrications internally.

35. For the same reasons as for machined parts, the Commission is therefore of the view that the proposed transaction is unlikely to allow the new entity to restrict access to fabrication that it would have otherwise supplied absent the merger (input foreclosure) or to lead to a scenario of customer foreclosure

36. In conclusion, the Commission takes the view that foreclosure effects as a result of the merger are unlikely on the markets for fabrication and aircraft engines.

(iii) Ring forgings (flash-welded rings)

Relevant product markets

37. Forged rings are used to manufacture various machined and fabricated parts for aircraft engines. Rings can be manufactured in two ways. The first is by a seamless forging process (which essentially consists in punching a hole in a thick metal disc) and the second is by flash welding (which is the bending of a metal bar and welding of the two ends of the bar).

38. Given the significant degree of demand-side substitutability between flash-welded and seamless rings, as detailed below, the notifying party submits that the relevant product market is forged rings, encompassing seamless and flash-welded rings.

39. Firstly, seamless rings constitute the vast majority of rings used in aircraft engines (more than 85%[17]).

40. Secondly, it is always possible to use a seamless ring in place of a flash-welded ring. Indeed, because of the welded joint in a flash-welded ring, the integrity of a flash-welded ring is lower than that of a seamless ring in particular in high-stressed or high-temperature parts of an engine, such as pressure vessels and seals. This was confirmed by all the engine manufacturers during the Commission's market investigation. For instance, Safran Group[18], an engine manufacturer, submitted that "*where flash-welded rings are used, Snecma's design systematically allows for the possibility to introduce seamless ring process*" and Honeywell that "*In approximately 90 per cent of cases, Honeywell uses seamless rings and flash-welded rings interchangeably. In containment zones for gas turbine engines, as with any other class of engine, such as air transport, regional and business aviation, Honeywell will only use seamless rings as these have higher strength and ductility than flash-welded rings*"[19].

41. Thirdly, when it is technically possible, engine manufacturers typically invite both manufacturers of seamless and flash-welded rings to participate to their tenders. GE provided examples of cases where it switched from flash-welded rings to seamless rings. Other engine manufacturers confirmed this practice in the market investigation. Honeywell explained that "*In most areas, Honeywell procure the seamless rings and the flash-welded rings in competition with one another*."[20].

42. Finally, the notifying party submits that flash-welded rings are generally cheaper than seamless rings. The price difference would be between around 10 to 20%, and occasionally more, depending on the alloy used and shape configuration of the ring. The results of the market investigation showed that the precise assessment of the price difference between seamless and flash-welded rings is difficult. Indeed, the costs of the two manufacturing methods are influenced by specific forging geometry and material type. Therefore, while market respondents broadly confirmed that flash-welded rings are generally cheaper, they also pointed out that seamless rings are also sometimes cheaper, where the geometric design is simple[21] or when the ring is longer, then seamless is more technically feasible to produce and therefore less expensive[22].

43. With regard to supply side, ring forging suppliers tend to specialise in the production either seamless or flash-welded rings as the equipment and technical expertise required for production is specialised for each product. This is the case for the largest flash-welded rings suppliers, such as Smiths Aerospace, Welded Rings,

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17 In 2006, total aerospace ring forgings sales amounted to [500-1,000M€], while aerospace flash-welded rings sales amounted to [100-150M€] (Data submitted by the notifying party – Form Co, tables 6.15 and 6.17)

18 Safran Group is active in engine manufacturing through Snecma. See response to questionnaire to engine manufacturers, question 8, received 30.03.2007.

19 See Honeywell response to questionnaire to engine manufacturers, question 8, received 30.03.2007.

20 See Honeywell response to questionnaire to engine manufacturers, question 9, received 30.03.2007.

21 See Firth Rixson's response to questionnaire to ring forgings manufacturers, questions 6 & 7, received 13.04.2007.

22 See Honeywell response to questionnaire to engine manufacturers, question 9, received 30.03.2007.

Defontaine and Cefival. Firth Rixson, the largest seamless ring forging manufacturer, also active to a lesser extent in flash-welded rings, submitted that "*in general equipment cost and start-up time for seamless ring rolling will be substantially greater than that of flash welded rings*".[23]

44. Furthermore, the notifying party submits that ring forgings products, being basic, unfinished input materials, are used in finished components for engines of all types of aircraft (i.e. large commercial, regional, corporate and military aircraft). Therefore the notifying party submits that it is not necessary to delineate the ring forgings market by type of aircraft. This approach was confirmed during the Commission's market investigation.

45. These elements suggest that, although there are some differences between the two types of rings, seamless rings are substitutable to a significant extent to flash-welded rings on the demand-side (one-way substitutability) irrespective of the type of jet engine in which they are to be integrated. However, for the purpose of the present decision, and as Smiths Aerospace is only active in the manufacture of flash-welded rings, it can be left open whether flash-welded and seamless rings belong to the same relevant product market since the conclusions of the competitive assessment would remain unchanged.

Relevant geographic markets

46. Consistent with other component markets, the notifying party considers that the relevant geographic market is global. This was confirmed by the Commission's market investigation.

Competitive assessment

47. The merger gives rise to a vertical relationship between Smiths Aerospace as a supplier of ring forgings to GE for its aircraft engines manufacture[24]. On the upstream market, Smiths Aerospace's market share is limited to [5-10%] on the market for ring forgings, the size of which is around EUR [500-1,000 million]. However, if flash-welded rings were considered to constitute a distinct product market (market size: EUR [100-150 million]), Smiths Aerospace's position would amount to [50-60%] of the market. The Commission's investigation thus focused on the competitive impact of this vertical relationship.

Input foreclosure

Flash welded rings do not appear to be a "key component" for engines

48. As explained above, for technical reasons, flash welded rings - the only rings manufactured by Smiths Aerospace - cannot be used for all applications. In those circumstances, seamless rings are the only rings available and represent around [80-90%] of the total sales of rings to the aerospace industry. Moreover, flash-welded

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23 See Firth Rixson's response to questionnaire to ring forgings manufacturers, question 10, received 13.04.2007.

24 It should be noted that GE manufactures in-house machined and fabricated parts and therefore purchases rings not directly for the engine production but for the production of components.

rings do not represent a significant cost factor relative to the price of the downstream product. The notifying party has estimated, on the basis on its total material input costs across its engine business that the flash-welded rings account for [0-5%] of an engine cost.

49. The fact that ring forgings are relatively low-tech products and therefore are not a significant source of product differentiation is furthermore acknowledged by the absence of in-house production by the engine manufacturers. While engine manufacturers produce internally a substantial part of the other engine components such as machined parts and fabrication, there is no flash-welded rings in-house production. The notifying party and its competitors submit that they do not see ring forgings as a core competency, or a technical or economical advantage to manufacturing these in-house. The decision making process for in-house production of engine components is well summarised by Honeywell[25]: "*The general principles driving the decision to keep in-house as opposed to purchasing from third parties are (a) company proprietary or trade secret interests (b) core competency resulting in a cost, quality, technical or responsiveness advantage and (c) concerns over the cost, volume and quality capabilities of suppliers as opposed to in-house. Where (a) and (b) are not in issue, the total landed cost will be considered.*".

50. In addition, ring forgings are built to print components produced using the engine manufacturer's designs and specifications for a particular engine. Therefore the ring forgings suppliers have no responsibility for the design of the parts they are producing, and no formal intellectual property rights, and merely perform an outsourced manufacturing function.

The new entity would not have the ability to foreclose access to flash welded rings

51. On the basis of the elements gathered during its investigation, the Commission takes the view that the merged entity would not have the ability to foreclose downstream engine manufacturers access to flash-welded forgings.

52. Indeed, should the new entity decide to direct its flash-welded rings production entirely to meet its own internal demand, which is rather unlikely for the reasons detailed below, there are other suppliers of flash-welded rings that offer equivalent products. The Commission's market investigation confirmed that Smiths Aerospace does not enjoy any specific strength such as capability or technology as regards the ring forgings production.

53. Other flash-welded rings suppliers include the US company Welded Rings which is the largest supplier after Smiths Aerospace and is currently supplying GE and Pratt & Whitney. According to GE, Welded Rings is currently operating at less than its total capacity usage, based on a single operating shift and could therefore easily increase its production capacity. The French companies Defontaine and Cefival are also established suppliers which already supply the engine manufacturers such as Snecma. The Commission received confirmation that at least two of these suppliers could easily and in a limited time extend in a significant proportion its current production capacity. Furthermore, Firth Rixson, which is mainly a seamless ring producer but which is also active in the supply of flash-welded rings[26], confirmed

25 See Honeywell response to questionnaire to engine manufacturers, question 17, received 30.03.2007.

26 Doncasters is also such alternative supplier.

during the market investigation that there were no barriers to expansion in the market for flash-welded rings.

54. Some engine manufacturers mentioned that the switching process could be costly and lengthy, in particular because of the certification process. However, the above mentioned suppliers which offer equivalent flash-welded rings to Smiths Aerospace are already certified to supply the aircraft industry.

55. Furthermore, as mentioned above, 100% of the flash-welded rings are built-to-print and the design rights of the components remain with the customer. The market investigation also confirmed that dual or multi-sourcing is a current practice for the ring forgings purchase and all engine manufacturers currently purchase flash-welded rings from at least two suppliers.

56. GE also submitted detailed information on its ring forgings contracts awarded during 2006. This shows that out of […] individual contracts, […] were switched between suppliers, within a timeframe of […] months and involving a cost of […] for each contract.[27]

57. In addition, customers of flash–welded rings are contractually protected from any immediate disruption of delivery that would prevent them from switching in a reasonable time. Indeed, typical contracts' duration for engine components and flash-welded rings in particular is at least three years. Furthermore, ring forgings manufacturers would also need some time to adapt their production process to new components designs.

58. Finally, customers could switch to seamless rings, which Smiths Aerospace does not produce and which, contrary to flash-welded rings, are suitable for all applications and are widely available as there are a large number of suppliers. While there may be some price difference between the two rings, there is already evidence of switching from flash-welded rings to seamless rings. GE submitted data on its ring forgings purchases that shows that in 2006, GE switched from flash-welded rings to seamless rings for […] contracts.

59. This appears to be common practice for some engine manufacturers such as Honeywell which even places in competition with one another seamless and flash-welded rings when launching a new bid.[28] Furthermore, a respondent to the Commission's market investigation active in the production of both seamless and flash-welded ring forgings indicated that it has "*often, with customer approval, moved parts from flash-welded to seamless rings due to capacity or availability or material availability issues. There are occasions when customers have allocated two drawing numbers one for Flash-Welded and one for Seamless Rings so that either can be produced. There can be noticeable but manageable cost differences in that Seamless Rings have a greater added value than Flash-Welded Rings. Moving parts from Flash Welded to Seamless is a relatively straight forward process having an insignificant schedule impact albeit needing customer approval*."

27 Form CO, annex 10.

28 See Honeywell response to questionnaire to engine manufacturers, question 9, received 30.03.2007.

The new entity would not have the incentive to foreclose access to flash welded rings

60. The Commission also takes the view that, in addition, the merged entity would not have the incentive to foreclose downstream engine manufacturers access to flash-welded forgings.

61. Smiths Aerospace currently supplies not only GE (representing [20-40%] of Smiths Aerospace flash-welded rings' sales) but also other engine manufacturers, such as Rolls-Royce ([20-40%] of Smiths Aerospace's sales) and Pratt & Whitney ([20-40%]). Post merger, should GE source all its demand of flash-welded rings from Smiths Aerospace, it would only absorb less than half of Smiths Aerospace's production. Furthermore, GE's purchases represent only about [20-40%] of the total demand for flash-welded rings. Thus, it is unlikely that the new entity would find it profitable to engage in a foreclosure strategy. Indeed, such a strategy would put at risk half of its profits generated by flash-welded rings. At the same time, there would be no guarantee that this loss would be compensated by extra sales of engines, given that GE competitors would be able to turn to other manufacturers of flash-welded rings or even seamless rings at a minimum cost.

62. In addition, any potential price increase of flash-welded rings by the new entity would be constrained by the possible switch to seamless rings, for which there is an ample offer. Given the very limited cost of this product and the existence of such an alternative product, any attempt by the merged entity to raise prices would be limited. Indeed, as shown by the notifying party, in the "worst case" scenario, a 20% price increase would equate to an effective price increase of [0-5%] of the cost of the engine. As a result, there would be little incentive for the merged entity to forego its sales on the rings market as, in any event, it would be unlikely to gain profit from expanding its sales of engines downstream.

Output (customer) foreclosure

63. During the course of its investigation, a supplier of ring forgings expressed its concerns that the merged entity may prevent its company from having access to the market for the supply of ring forgings because of the merged entity indigenous capability of ring forgings. However this ring forgings supplier is not an actual supplier of flash-welded rings to GE.

64. The Commission analysed this concern in some detail, and found that the proposed transaction would not bring about such a degree of customer foreclosure that competition would be significantly impeded.

65. Indeed, the Commission found that should the merged entity reduce its purchases of flash-welded rings from third parties, this would not have a detrimental effect on the flash-welded rings suppliers as the customer base is sufficiently large and is likely to turn to these independent suppliers. As noted above, GE's demand is only representing [20-40%] of the total demand of flash-welded rings and GE is already sourcing [50-80%] of its flash-welded rings needs from Smiths Aerospace. Therefore the proposed transaction would not significantly change the current situation, even in the case that GE would source its total flash-welded rings demand from Smiths Aerospace.

Additional issues

Access to confidential information

66. In the course of the market investigation, one Smiths Aerospace customer mentioned that post-merger, the new entity should set up mechanisms to protect IP rights, commercial and technical information supplied by the engine manufacturer to Smiths Aerospace for the ring forgings manufacture.

67. In the Form CO, the notifying party submitted that it is common within this industry for customers to have supply relationships with competitors, and that it is dealt with confidentiality arrangements and internal information barriers. For example, GE submitted that it is currently supplying its competitors with various components through its Unison business and similarly sources components from its competitors, such as UTC, a sister company of the engine manufacturer, Pratt & Whitney.

68. In addition, as detailed above, flash-welded rings are standard component and not technical differentiators as the technically sensitive components are manufactured in-house. Furthermore flash-welded rings are built-to-print components. Therefore engine manufacturers retain the intellectual property rights of their components and prevent ring forgings manufacturers to use them for another purpose.

"Near-net shape" process

69. In some instances, machined and fabricated parts suppliers buy forged rings in a "near-net" shape, which is a closer shape to the final one, and is achieved through the "near-net" shape process which minimises the material input cost, machine time and labour required to achieve the final shape.

70. One way of achieving the "near-net" shape product is the Tru-Form process which involves taking a flash-welded or seamless ring and cold-rolling it using high tonnage rolls. This process allows saving 10% to 30% on the cost of materials. This process is only used on a relatively low proportion of ring forgings ([10-20%] of Smiths Aerospace flash-welded rings) as the decision to use Tru-forming or a similar process generally depends on the value of the materials, which can be expensive for example for rings made of nickel.

71. Some customers mentioned during the course of the market investigation that Smiths Aerospace had a unique capability as regards Tru-Form process. However the Commission found that while the "Tru-Form" name is protected as a trademark of Smiths Aerospace, the Tru-Form process is not proprietary to Smiths Aerospace and not protected by any intellectual property rights. Indeed, other manufacturers such as Firth Rixson, Doncasters, Welded Rings, Cefival and De Fontaine apply the "near-net" shape production technique to ring forgings.

Conclusion

72. In view of these elements, the Commission considers that the proposed merger is not likely to significantly impede effective competition as a result of vertical effects on the markets for forged rings (or alternatively for flash-welded rings) and for aircraft engines.

B. Aircraft engines and access to Smiths Aerospace's input for the open rotor concept

73. In the course of the market investigation, [a third party] raised the concern that the proposed transaction would [confidential third party] an open rotor engine, to airframe manufacturers as it would be [confidential third party] the technological input of one of Smiths Aerospace's subsidiary, Dowty Propellers (hereafter "Dowty"). Dowty is active in the design and certification of composite bladed propeller systems for civil and military turboprop aircraft, and in repair and maintenance services for propeller systems. This third party considers [confidential third party]. The claim concerns the development of a new engine concept, the "open rotor" engine, which is currently under study by [the third party] and that it would be willing to propose to aircraft manufacturers for the next generation of narrow body LCA.

74. While, in some cases, it may be considered that a merger may significantly impede competition by removing one of two important innovators, notably when these companies have promising "pipeline" products[29], the elements gathered during the investigation carried out in the present case do not show that the proposed transaction raises serious doubts in this respect.

75. Indeed, the Commission found, firstly, that there are still major uncertainties on the development of such open rotor engine concept in the foreseeable future so that it can hardly be considered as a pipeline product and secondly, that Smiths Aerospace's contribution (through its subsidiary Dowty) cannot be considered [confidential third party].

1. Uncertainties about the open rotor concept

76. On the basis of the elements developed below, the Commission came to the conclusion that the open rotor concept is far from being the most likely technology to be adopted in the foreseeable future and that it would be highly speculative, at this stage, to consider this concept as a pipeline product.

(i) More mature competing technologies

77. In the course of its investigation, the Commission found that, for the moment, the open rotor concept is not the most likely development in jet engines for the next generation of narrow body large commercial aircrafts and that it is still at a very early stage of development.

78. The open rotor concept that has been explored in research and development programmes is to use two rows of propeller blades, one behind the other and rotating in opposite directions (contra-rotation). GE developed an open rotor blade engine in the late 1980s, but this engine was never commercialised. While the open rotor concept could bring some benefits such as lower fuel costs and lower CO_2 emissions, there are serious technical issues: excessive noise produced by this type of engine, significant expected maintenance cost disadvantage (due to the increased

29 See, in particular, Horizontal Merger Guidelines, at paragraph 38. It must be emphasised however that, in the present case, the claim relates to a possible vertical effect of the merger rather than to a horizontal effect given that Smiths Aerospace is not developping jet engines as such in competition with other engine manufacturers.

variable geometry – i.e. the need to be able to vary the pitch of the blade for the engine to function) and potential for significantly increased flight delays and cancellation due to maintenance issues. These technical issues are not yet solved. In addition, this concept implies the need to redesign the aircraft platform as an open rotor engine is also significantly larger than conventional turbofan engines and could not be mounted in a traditional configuration beneath an aircraft's wing.

79. Although the open rotor technology is considered by an airframer as "*a very promising prospect, be it not mature or proven yet*", this airframer, as well as other airframers, confirmed during the market investigation that there are currently other engine technologies that are envisaged for the next generation of narrow body LCA and that these alternative technologies are more mature and therefore more likely to be selected. These technologies, which would bring less radical changes in the aircraft architecture than the open rotor concept, include the upgrade of the conventional turbofan as well as the development of the geared turbofan. An airframer stated "*accommodating these engines would require very substantial changes to be made to the airframe. It would not simply be a case that [we] could just as easily fit an open rotor engine or a conventional engine on to the same plane. The need to design and build aircraft specifically to accommodate open rotor engines is definitely a significant issue in terms of the future viability of these engines, as it will require that such engines show very significant benefits (such as major performance improvements) over conventional engines in order to justify the change*."

80. These views were also confirmed by some engine manufacturers. One of the engine manufacturers supplying engines for LCA[30] recently declared: "*The only way we see to get better fuel burn would be to an open rotor prop fan, which by the way also requires a gear. We tested this in the 1980s. It has significant noise issues, and it has customer passenger acceptance issues. So our job is to make sure we're absolutely ready with the best advanced turbofan technology and putting the gear on top of that. And that is what we are focused on doing. We have invested nearly $1 billion in the last 20 years on this combination of advanced turbofan technology and gear technology. Over this time we have refined the gear. We have made it smaller. We have made it more light weight and we have made it extremely reliable. Now we're in the last phase of the technology readiness proving. We are assembling an engine in the exact size that would be required for the new small family of aircraft, and we will test it late this year. And then next year we will put it on our flying test bed and demonstrate the benefits in flight. We will be ready in 2012 for entry into service with this engine in this size*."

81. [The third party] is also involved in the development of [confidential third party] more conventional engines [for the next generation LCAs]. As stated [confidential third party] in July 2006, "[confidential third party]".[31]

(ii) Unforeseable time frame

82. The development of the open rotor concept by the third party [confidential third party] started in [confidential third party] and is still [confidential third party].

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30 Speach by G. David, Chairman, CEO, UNITED TECHNOLOGIES, at United Technologies Analyst Meeting 28 February 2007.

31 [confidential third party]

83. According to airframe manufacturers, in light of previous experience with open rotor prototypes, it is difficult to make predictions as to whether and when this type of engine could come onto the market. According to one of them, one possibility is that a demonstrator prototype could be available around 2015, which would then have to be developed and certified (around 2018). Another one indicated that it is a matter of speculation as it is a concept that has been around for 20 years.

84. This uncertain timeframe explains the difficulty for aircraft manufacturers to make any prediction today on the possibility to introduce the open rotor concept on the next generation of narrow body LCA. It is not yet clear to them whether the open rotor concept will be at an enough advanced stage by the time that the engine selection will be made. Indeed, both aircraft manufacturers, Boeing and Airbus, indicate that the next generation of narrow body LCA may be launched in 2015, so that the engine selection would take place earlier. Therefore the engine selection process may take place at a time when the open rotor technology is not yet proven.

85. In that respect, GE submits that […] next generation of narrow-body aircraft will use wing-mounted engines, i.e. turbofan engines, and GE is currently working on developing its "LEAP56" turbofan technologies for the next engine competition. This is demonstrated by the fact that GE […] development work on the LEAP56 programme and has allocated […] the budget for research into turbofan technologies than is even budgeted for continued airframer feasibility studies of potential alternative aircraft engines using open rotor concepts. GE was involved through CFMI[32] in a feasibility study on open rotor engines […]. This study examined how long it might take to develop an open rotor engine. It concluded […]. Thus it would take approximately […] to develop an open rotor engine, should the technical problems related to this new concept be solved. [confidential third party], internal documents submitted by the third party show that, for their own rotor project, their prediction was to [confidential third party]. The engine would have then to be tested and certified by the end of [confidential third party].

86. Several reports confirm that the future of open rotor engines remains highly speculative. In recent declarations, the third party [confidential third party] suggested that there are major uncertainties on the development of such concept in the future: in July 2006, it submitted that "[confidential third party]" and furthermore added "[confidential third party]"[33]. In an aeronautic magazine[34], it also declared that "[confidential third party]".

87. Other market participants are reported to be on the same line as regards the speculative nature of the open rotor concept. For instance, Boeing's vice president of product development, Dan Mooney, declared "*it's far too early to worry about certifying specific designs. [He's] directing money into these projects only to find out*

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32 In an article reporting on one Safran's representative, GE's partner in CFMI, Safran states that given that the next generation engine and and aircraft are expected to be in operation in 2015 or maybe later, Safran has two years to evaluate the priority and performance trade-offs with a view to determine when the unducted fan technology, i.e. the open rotor, would be a possible powerplant for the next generation of single aisles – *Flight International, 17-23 April 2007* - See however internal CFMI's feasibility.

33 [confidential third party]

34 [confidential third party]

which of the potential technologies may make senses" and indicates that "*his concept teams think out beyond 15 or 20 years*".[35]

88. In a later submission, the third party [confidential third party] explained that the first key milestone will be as early as [confidential third party], when an aircraft manufacturer is said to take a decision on whether open rotor technology could be viable for [confidential third party] service entry. It however acknowledges that it would not involve specific selection of engines for the aircraft. Indeed an aircraft manufacturer would require a demonstrator programme before selecting such a radical engine design, which would be at the earliest in [confidential third party] in the time frame of the third party [confidential third party] or at the earliest in […] in the time frame of CFMI.

89. The Commission concludes that it would be highly speculative to consider such concept as a pipeline product in the light of these elements showing that there are still major uncertainties on the development of an open rotor engine in the foreseeable future. In addition there are indications that other more mature technologies are more likely, at this moment, to be ultimately selected for the next generation of LCAs. Moreover, as explained below, should a key decision be taken by one airframe manufacturer as soon as [confidential third party] as regards the viability of such concept (absent any selection), the fact that Smiths Aerospace's cooperation up to date has been [confidential third party].

2. Smiths Aerospace's input is not critical

(i) Smiths Aerospace's contribution is [confidential third party]

90. Although a [confidential third party] Agreement was considered [confidential third party] [36]. [confidential third party][37].

91. Furthermore, Smiths Aerospace does not own any patents or intellectual property rights at all in relation to open rotor blades. [confidential third party].

92. The contribution of Smiths Aerospace has so far been [confidential third party] compared to the total Dowty's activities which generated sales of […] in 2006.

93. As regards possible expenses, [confidential third party]

94. The Smiths Aerospace financial input has to be compared with [confidential third party]. As to the total cost of developing an open rotor engine, the notifying party submitted that its estimate is at least £1 billion.

(ii) Smiths Aerospace's contribution is [confidential third party]

95. [confidential third party]

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35 Dream machines; At Boeing, two small teams re-imagine the airplane to be green and save green By Dominic Gates, Seattle Times 10 June 2006

36 [confidential third party]

37 See [confidential third party]

96. The Commission found that the open rotor concept was mainly driven by engine manufacturers rather than propeller manufacturers ([confidential third party]). This was confirmed by aircraft manufacturers and also shown by the past experiences in the field of open rotor design. Indeed two of the main engine manufacturers, GE and Pratt & Whitney were able to develop an open rotor engine prototype in-house in the late 1980's. These projects were abandoned at that time and no open rotor blade engines commercialised, not only because the issue of fuel cost became less stringent, but also because the main technical problem of noise was not solved.

97. The third party [confidential third party] could [confidential third party].

98. Nevertheless, even if outsourcing part of the project were the option preferred by [the third party], it is far from excluded that alternative suppliers could continue the work done by Smiths Aerospace. [confidential third party].

99. In addition, it is worth noting that the third party [confidential third party] is involved in [confidential third party].

100. On the basis of these elements, the Commission is of the view that the merger is not likely to significantly impede effective competition on the market for the supply of jet engines for large commercial aircraft.

C. Thrust Reverser Actuation Systems and Thrust Reversers

101. GE supplies thrust reversers to aircraft manufacturers—that is, mechanical systems used to reverse the thrust of a jet engine so as to reduce the aircraft's speed after landing[38]. Thrust reversers are located next to the engines, in the aircraft nacelles.

102. Thrust reversers, in common with other moving parts of the aircraft, are moved with the aid of actuators[39]. The specific actuators used to move thrust reversers are called thrust reverser actuator systems (TRAS).

103. As Smiths Aerospace manufactures TRAS that are generally sold to thrust reverser manufacturers (such as GE's subsidiary Middle River) that integrate them into the thrust reverser, the proposed transaction would create a vertical link.

Relevant markets

104. The notifying party considers that thrust reverser could possibly constitute a distinct product market. As regards actuators, the notifying party submits that the relevant product market is aircraft actuation systems encompassing TRAS and all other aircraft actuation systems as they operate in a similar fashion and generally use similar component types. However the notifying party has also submitted market share data on the basis of a narrower market definition, by reference to TRAS only.

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38 This is done by changing the path of the air exiting the engine. Consequently, while engines continue to function "normally" when planes touch down on a runway, thrust reversers are mechanical parts that are moved to change the direction of the air flow at the back of the engine. This creates a drag on the plane that helps reduce its kinetic energy.

39 For example, actuators are used to move the aircraft's flaps, spoilers, stabilizers, rudders, landing gears, and cargo doors.

105. In its decision in the case *COMP/M.2892 Goodrich / TRW Aeronautical Systems Group*, the Commission had considered the markets for thrust reversers and for thrust reverser actuators. The market investigation in the present case did not suggest any alternative market definition.

106. However, the question whether thrust reversers and TRAS are two relevant product markets or whether they should be seen as part respectively of the market for wider aerostructure and aircraft actuators can be left open as it would not materially affect the conclusions of the competitive assessment of the notified concentration.

107. In line with previous aerospace decisions[40], the notifying party submits that the markets for thrust reversers and for actuators or TRAS are world-wide in scope.

Competitive assessment

108. On the downstream market for thrust reversers, GE has a [0-5%] market share. On the upstream market for actuators, Smiths Aerospace has [10-20%] market share. If the upstream market is defined more narrowly as TRAS only, Smiths Aerospace's market share is [30-40%].

109. On the TRAS market, while Smiths Aerospace sales account for [30-40%] of the total market sales, it faces the competition of the two market leaders on the market for thrust reversers, Goodrich ([20-30%]) and Safran ([10-20%]) which are vertically integrated in the production of TRAS. In addition, Goodrich is the market leader in the sales of TRAS with a [30-40%] market share. Therefore the merged entity would not be able to foreclose access to TRAS or increase prices as the main customers could source in-house and would also be in a position to supply third parties. Furthermore, the merged entity would not have the incentive to foreclose access to TRAS as GE only represents […] of Smiths Aerospace sales, its principal customers being […].

110. As regards a possible scenario of customer foreclosure, this appears to be unlikely as GE is a small supplier of thrust reversers and hence a relatively small customer for Smiths Aerospace and its competitors. Thus it is clear that access to GE is not essential for other suppliers of actuation systems to compete.

111. In conclusion, the Commission takes the view that foreclosure effects as a result of the merger are unlikely on the markets for TRAS and thrust reversers.

Additional issue

112. In the course of the market investigation, one third party, [confidential third party], claimed that the proposed concentration would [confidential third party] complex actuation systems for the lift system in the Short Take-Off and Vertical Landing ("STOVL") variant of Joint Strike Fighter ("JSF") that are currently supplied by Smiths Aerospace.

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40 See inter alia Case No IV/M. 697 – Lockheed Martin/Loral Corporation, COMP/M.2220, GE/Honeywell, Case No COMP/M.2738, GEES/Unison and Case COMP/M.2892 Goodrich / TRW Aeronautical Systems Group.

113. However the Commission found that it is unlikely that post merger the new entity would [confidential third party] the [third party] to these specific actuators for the reasons detailed below.

114. Firstly, the procurement of the actuators takes place in the context of the JSF programme which is a US programme involving 8 other partner nations, with the majority of the funding coming from the US Department of Defense. As regards engines, two alternative solutions are currently in development: one from Pratt & Whitney and one from a joint venture involving GE and Rolls-Royce. Therefore, the procurement is strictly controlled by the US Federal Acquisition Regulations, which specifically provide that a product cannot be withheld during a commercial dispute between the parties and also controls the pricing of the work, as the Department of Defense is the principal funding source. In addition, it is unlikely that the merged entity would have the incentive to withdraw supply or raise price as GE is one of the two alternative engines for the JSF and a downstream customer of actuators.

115. Secondly, Smiths Aerospace has been so far involved in the design and development of a number of actuation packages. The contracts for the manufacturing of the components for production have not yet been awarded. The design stage is complete and Smiths Aerospace has a contractual obligation to complete the development contract, which is to be by […]. As regards the manufacture of the actuators, Smiths Aerospace submits that it is not in a unique position as there are many alternative suppliers, including suppliers which competed in the tender for the design and development works (Claverham, GEC Marconi and Goodrich). Should the new entity decide not to bid for the manufacturing work, which is unlikely as GE has no incentive as a downstream customer to damage this work, then the alternative supplier would have access to the relevant IPR and drawings. [confidential third party] .

D. Conglomerate Issues

Flight management systems for LCA and fuel quantity measurement

116. As explained above, GE sells jet engines mainly to airframers (Boeing, Airbus). As Smiths Aerospace also markets some of its products to airframers, the possible risks of conglomerate effects are examined below on markets where Smiths Aerospace's market position is significant, that is, the markets for flight management systems for LCA (market share: [20-30%]), and fuel quantity measurement (market share: [20-30%])[41].

Risks of strengthening of GE's dominant position on the market for LCA engines

117. As mentioned above, GE holds a dominant position on the market for LCA engines. However, the transaction is unlikely to enable GE to strengthen this position for example by commercially bundling GE's engines for LCA with Smiths Aerospace's products[42] and no concerns relating to possible conglomerate effects on

41 The market for power distribution networks for which Smiths holds a market share of [20-30%] is treated together with power generators in the next section.

42 According to the information provided by the notifying party, the transaction does not make technical tying possible.

the markets for flight management systems for LCA and fuel quantity measurement have been raised in the course of the market investigation.

118. Indeed, Smiths Aerospace's products are of low value compared to GE's engines. Thus, a discount on Smiths Aerospace's products would have little effect with respect to the price paid for an engine. Secondly, GE would have to overcome the fact that Smiths Aerospace is not a market leader on the markets mentioned above, indicating that Smiths Aerospace might offer better products: Honeywell holds [50-60%] of the market for flight management systems for LCA, [30-40%] of the power distribution networks, and Goodrich has a 30-40% market share for fuel quantity measurement products. Finally, this strategy would be unlikely to be successful all the more as Smiths Aerospace products are sold to airframers (Airbus, Boeing) whereas [30-40%] of GE's engines for LCA are purchased by airlines.

Risks of foreclosure for Smiths Aerospace's competitors

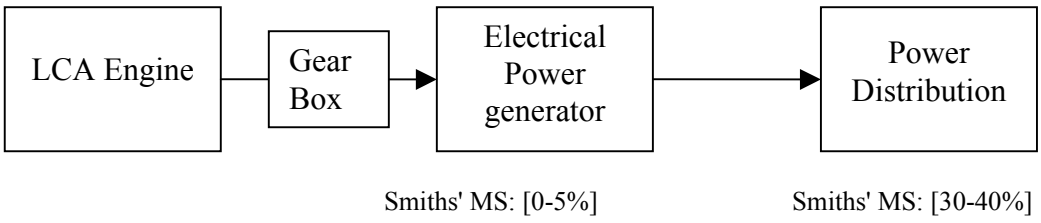
119. Likewise, the risks that the new entity will be able to foreclose Smiths Aerospace's competitors by leveraging its dominant position on engines for LCAs are minimum. As emphasized by the CFI in the GE v. Commission judgement, most of GE's sales of engines for LCAs are made through CFMI, a joint venture with Safran. As it is not in the interest of Safran to forego profits on LCA engines to the benefit of Smiths Aerospace products, it is very unlikely that the new entity will have the ability to use its market position on LCA engines to foreclose Smiths Aerospace's competitors[43]. Accordingly, no engine manufacturers expressed the fear that GE would be able to strengthen its dominant position on the market for LCA engines as a result of conglomerate effects brought about by the proposed acquisition of Smiths Aerospace.

Electrical power generator and power distribution

120. In the course of the market investigation, a third party raised the concern that GE could use its dominant position on LCA engines to foreclose competitors on the market for power generation and the market for power distribution.

121. The current architecture of electric power generation and power distribution with respect to engines does not allow for technical tying. Indeed, electric power is extracted via an electrical generator mounted on a gearbox that is connected to one of the engines. The electrical power is then distributed to equipment loads through the power distribution network. The architecture is summarized in the following chart with Smiths Aerospace's market share in the relevant markets:

43 Case T-210/01, General Electric Company v. Commission, judgement of 14 December 2005, not yet reported, para 385.



122. As can be seen from the above chart, there is no interface between engines and either electric generation or electric distribution products. However, the third party claimed that, mainly for reasons of power management efficiency[44], electrical generator might in the future be more directly linked with the engine (with the removal of the gearbox). The third party adds that some parts of the power distribution network are likely to be incorporated into the engine systems in an effort to control more efficiently the electric power in the aircraft[45]. These claims lead the third party to conclude that GE is likely in the future to leverage its dominant position in the market for LCA engines to foreclose manufacturers of power generation and power distribution systems, in particular by offering integrated solutions.

123. As can be seen from the above chart, the least unlikely tying that could occur is a tying between engines and electrical power generator. The likelihood of such a development is however not evident taking into account other submissions. Indeed, the market investigation confirmed that the aircraft manufacturers specify the requirements for the interface of the engine and electrical power generation both for technical and economic reasons and that airframers do not expect to change their policy even with the development of "More Electric Aircrafts". The notifying party has also commented that the integration of electric generators to engines is still an unproved concept and at the research stage as there are significant technical difficulties to developing such a product (in particular the difficulties of locating a generator within a nacelle, exposed to the heat of the engine). Manufacturers confirmed that they do not consider that this would change should there be integration of engines with power generators. In addition, there is no proprietary link between engines and power generation or distribution and the More Electric Aircraft is not expected to change this.

124. Even under the therefore relatively unlikely hypothesis that such tying will occur, the prospects of having Smiths Aerospace's competitors marginalized and ultimately airframers hurt seems particularly thin. First, Smiths Aerospace's market position on the market for power generation is marginal which suggests that Smiths Aerospace is far from being the first choice of airframers (by way of comparison, UTC has more than [30-40%] of the market, Goodrich [0-10%], and Honeywell [0-10%]). It is therefore unlikely that airframers would accept the tying of engines and power generation systems if this leads to a decrease in quality and performance. Such a strategy would also put at risk the sales of GE's LCA engines, a move that is unlikely to be accepted by SAFRAN, GE's partner in the joint venture CFMI.

44 New aircrafts privilege electrical power over hydraulic or pneumatci power. As a result, more electrical power needs to be extracted from engines and this extraction is therefore more critical in new aircrafts.

45 These claims are based on potential developments of the "More Electric Aircraft" framework.

Second, another competitor of Smiths Aerospace, UTC, is able to offer engines and power generation systems so that it would be able to replicate GE's strategy. Third, other Smiths Aerospace's competitors would be able to respond to the tying behaviour of the new entity by teaming up with another engine manufacturer.

125. As regards a possible tying between LCA engines and power distribution products, this seems even more unlikely than the tying of engines with power generators given that engines and distribution networks are only remotely related in the aircraft component architecture. Furthermore, while Smiths Aerospace's sales represent [30-40%] of the open market, this market share does not fully reflect Smiths Aerospace's competitive strength as the majority (around [70-80%]) of power distribution products are manufactured and installed by airframers[46]. Thus, the market power of Smiths Aerospace seems too limited and the in-house production of airframers too important as to have the latter hurt in the long run by a tying strategy implemented by the new entity.

Conclusion

126. In conclusion, in this specific case, conglomerate effects as a result of the proposed transaction are unlikely to arise.

IV. CONCLUSION

127. For the above reasons, the Commission has decided not to oppose the notified operation and to declare it compatible with the common market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of Council Regulation (EC) No 139/2004.

For the Commission
signed
Neelie KROES
Member of the Commission

46 In addition, while Smiths Aerospace failed to win either of the most recent large commercial contracts, its main competitors have recently won important contracts for the supply of electric distribution products for the B787 (Zodiac and Hamilton Sundstrand) and for the A380 (Honeywell and Zodiac). These recent events should in particular increase Honeywell's already significant position ([30-40%]).