# Case No COMP/M.6039 -GE/ DRESSER

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# REGULATION (EC) No 139/2004 MERGER PROCEDURE

Article 6(1)(b) NON-OPPOSITION Date: 04/01/2011

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## EUROPEAN COMMISSION



Brussels, 04/01/2011

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In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

MERGER PROCEDURE ARTICLE 6(1)(b) DECISION

#### To the Notifying party:

Dear Sir/Madam,

# Subject:Case No COMP/M.6039 – GE/ Dresser<br/>Notification of 19 November 2010 pursuant to Article 4 of Council<br/>Regulation No 139/20041

1. On 19 November 2010, the European Commission received a notification of a proposed concentration pursuant to Article 4 of Council Regulation (EC) No 139/2004 by which General Electric Company ("GE", USA) acquires within the meaning of Article 3(1)(b) of the Merger Regulation control of the whole of Dresser Holdings, Inc ("Dresser", USA), by way of a purchase of shares.

## I. THE PARTIES

- 2. GE is a global, diversified manufacturing, technology and services company. GE is made up of five primary business units, each with its own divisions. Its primary business units include: GE Energy, GE Technology Infrastructure, GE Capital, GE Home & Business Solutions, and NBC Universal.
- 3. Dresser is a global producer of energy infrastructure, and oil and gas products and services. It has six main product lines, namely control valves, natural gas solutions, pressure relief

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<sup>&</sup>lt;sup>1</sup> OJ L 24, 29.1.2004, p. 1 ("the Merger Regulation"). With effect from 1 December 2009, the Treaty on the Functioning of the European Union ("TFEU") has introduced certain changes, such as the replacement of "Community" by "Union" and "common market" by "internal market". The terminology of the TFEU will be used throughout this decision.

and safety valves, measurement systems, compression and power systems, and air and gas handling.

# II. THE OPERATION

4. As a result of the transaction, Dresser will ultimately become a wholly owned subsidiary within the GE group of companies. It follows that the proposed transaction is a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

# **III. EU DIMENSION**

5. The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million<sup>2</sup> (GE: EUR 112,405 million; Dresser: EUR [...] million). Each of them has an EU-wide turnover in excess of EUR 250 million (GE: EUR [...] million; Dresser: EUR [...] million). Neither of them achieves more than two-thirds of their aggregate EU-wide turnover within one and the same Member State. The notified operation therefore has an EU dimension pursuant to Article 1(2) of the Merger Regulation.

# **IV. RELEVANT MARKETS**

6. The main products involved in this transaction and relevant to the EEA are gas gensets (including as the critical component gas reciprocating engines for power generation), compressors and valves. It is only with respect to gas gensets that horizontally affected market(s) arise. A genset is a package that combines the reciprocating engine with various ancillary equipment, such as generator, switching gear, a turbocharger and possibly other equipment at the customer's option. The parties' horizontally overlapping activities in compressors and valves result in combined market shares not exceeding 15% under any alternative product and geographic market definition. Otherwise the parties' activities are complementary. As regards vertical relationships, the market for the supply of gas gensets is vertically related (downstream) to the market for the supply of gas engines for power generation, where only Dresser is active with merchant sales to third parties (GE is vertically integrated into the production of gas engines and production of gas gensets and does not sell its engines to the merchant market).

# Product market definitions

# IV.1.1. Gas Reciprocating Engines for Power Generation

- 7. Dresser's power and compression business segment manufactures and sells gas reciprocating engines for mechanical drive applications and, to a lesser extent, for power generation applications under the Waukesha brand. Dresser's gas engines production facility is situated at Waukesha, Wisconsin, USA. Dresser sells gas engines ex factory to distributors and packagers who import the engines into the EEA and elsewhere around the world. With regard to the EEA, Dresser has [details about Dresser's contractual relationship with distributors and end-customers concerning the sale of engines and maintenance services].
- 8. GE manufactures gas reciprocating engines for power generation but it does not sell them separately from its gensets (marketed under GE's Jenbacher brand), *i.e.*, unlike Dresser, GE Energy does not sell "bare" engines to the merchant market. GE's production

<sup>&</sup>lt;sup>2</sup> Turnover calculated in accordance with Article 5(1) of the Merger Regulation.

facility for gas engines for power generation is located in Jenbach, Austria. At this facility, GE not only manufactures gas engines but also combines them with generators and other auxiliary equipment for sale as a gensets. The generators [...] are purchased from outside suppliers. GE also has an assembly and packaging facility at Veresegyhaz, Hungary, and another packaging facility located in Hangzhou, China. Sales to end customers and after sales service within EEA are conducted by GE's subsidiaries in Denmark, Germany, Italy, the Netherlands and Spain. GE also sells to some distributors within and outside the EEA.

- 9. Dresser's gas reciprocating engines range in power from 0.25 to 3.5MW, while GE's Jenbacher gas reciprocating engines range in power from 0.25 to 9.5MW. Both parties' engines run on a variety of gaseous fuels.
- 10. The Commission has looked at potential product market definitions for reciprocating engines in 2003 when GE acquired Jenbacher and considered a number of different alternatives.<sup>3</sup> The Commission suggested that reciprocating engines could be distinguished according to their applications (*i.e.*, transportation versus power generation versus mechanical drive/gas compression), the input used (*i.e.*, diesel- versus gas-fuelled, and within the gas-fuelled category, natural versus non-natural gas) and their output ranges (*i.e.*, above or below 10MW). The Commission also suggested that reciprocating engines could be distinguished from all types of turbines by reason of their operating conditions, efficiency, technical characteristics and price, which was confirmed at the time by the market investigation.<sup>4</sup> The Commission has not yet assessed the vertical relation between the supply of reciprocating gas engines for power generation and gas gensets with reciprocating gas engines for power generation as their component but it indicated that the manufacturing of basic components of diesel gensets (such as engines, alternators, switching gears, etc.) constitutes upstream markets with respect to diesel gensets.<sup>5</sup>

*Reciprocating engines for different types of applications (power generation v. mechanical drive/gas compression v. transportation)* 

11. Reciprocating engines generate rotary motion that can be coupled to drive another device (*e.g.*, a compressor, propeller or generator) for respectively mechanical drive/gas compression, transportation (marine and locomotive) and power generation applications. Reciprocating engines operate on a wide range of liquid and gaseous fuels. They range in output from 0.005 to 100MW. Reciprocating engines running on gaseous fuels (*i.e.*, gas reciprocating engines), however, are not currently manufactured above 20MW. Gas engines currently are rarely, if ever, used for marine applications. Within industrial applications, a further distinction can be made between gas engines for power generation applications and gas engines for mechanical drive/gas compression applications. GE is only active in gas engines for power generation, while Dresser offers engines for both applications. As regards gas engines for power generation, the parties submit that more than 99.5% of gas engines are used for the production of primary power, while less than 0.5% are used for stand-by applications.<sup>6</sup>

<sup>&</sup>lt;sup>3</sup> See Case COMP/M.3113 – *GE/Jenbacher* of 14 April 2003.

<sup>&</sup>lt;sup>4</sup> See Case COMP/M.3113 – *GE/Jenbacher* of 14 April 2003, recital 9.

<sup>&</sup>lt;sup>5</sup> See Case No. IV/M.700 – *EMERSON/CATERPILLAR* of 24 April 1996, recital 33.

<sup>&</sup>lt;sup>6</sup> According to the parties' estimations, stand-by applications might be slightly more frequent outside of the EEA.

12. The parties submit that engines for both power generation and mechanical drive/gas compression applications share the same fundamental technology but are technically different. In particular, engines for power generation run at constant speed, while engines for mechanical drive applications are designed to run at variable speed. Developing an engine for mechanical drive applications from an engine for power generation, and vice versa, is complex, can take several years, and may not be successful. The Commission's market investigation confirmed the parties' contention and indicated that gas engines for power generation applications and gas engines for mechanical drive/gas compression applications might not be substitutable. In particular, it appears that an important difference from the customers' perspective is that engines for power generation achieve higher efficiencies than engines for mechanical drive/gas compression and that engines for mechanical drive/gas compression normally only run with natural gas.

## Reciprocating engines operating on different fuels

- 13. With regard to input, the parties are only present in gas reciprocating engines and not in diesel fuelled engines. The parties and most of their competitors offer gas engines suitable for different types of gases, both natural and non-natural, such as propane, pipeline natural gas, non-pipeline natural gas, renewable gaseous fuels and hydrogen blends. GE is relatively stronger in engines running on non-natural gas, whereas Dresser's presence is negligible in this segment and focuses on natural gas fuelled engines.
- 14. As regards the distinction according to different types of gas as input, the parties submit that the basic structure, parts and functions of a gas engine for power generation are the same, irrespective of the type of gas on which it runs, but that its design and settings can be optimized for different gases.
- 15. The Commission's market investigation has indicated that, from a demand-side perspective, the choice of fuel type is primarily a consideration of availability and cost. From a supply-side perspective, there is indeed almost no difference in the manufacturing of natural gas and non-natural gas engines and suppliers can switch production between the two products, as both can be produced using the same production lines from start to finish. The main difference relates to the treatment of the different types of gases, gas efficiency, gas variability and potential impurities, which lead to adjustments in electronic control and cooling systems and use of adapted mechanical hardware.

## Output ranges and speed

16. Gas reciprocating engines for power generation range in power output from well below 0.3MW up to 20MW and in speed from low speed engines of 500 RPM ("Rotation Per Minute") to medium speed engines of 150-1000 RPM and high speed engines of 1500 RPM.<sup>7</sup> Respondents to the Commission's market investigation suggested that the market for gas engines could be divided in different segments according to engines' output (*e.g.* under 1MW, 1-2MW, 2-5MW and above 5MW; other ways of segmentation have also been suggested) and according to different speeds of engines.

<sup>&</sup>lt;sup>7</sup> These ranges may differ slightly for generators that produce 60 Hz electricity for power networks used in North America, parts of Latin America, Taiwan, parts of Korea and Japan.

- 17. The parties submit that gas engines with different outputs and speeds are used across different applications within power generation. Moreover, customers might be equipped with one large engine or multiple smaller engines falling into another output range depending on different considerations, such as cost of the engine(s), installation, cost of fuel (which differs considerably from country to country), availability of space, redundancy (in case of accident or maintenance) and customer's need for flexibility. In order to demonstrate that competition takes place between different output sizes of gas engines, the parties presented a range of examples where they (both successfully and unsuccessfully) competed for specific power generation projects offering engines falling within different output ranges than their competitors for a given project.
- 18. The market investigation showed that the overall cost per MW installed might frequently be lower with larger individual engines than with multiple smaller ones. However, it also showed that there is a certain degree of substitutability between engines of different outputs, especially in light of the fact that customers take into account several factors in order to choose an engine that best suits their needs and in practice this is something that competitors competing for a project would model individually for a given customer. It also appears that boundaries between different output ranges and speeds tend to change over time as technology and efficiency improves. Moreover, the boundaries seem to have been chosen by research bodies to ensure comparability of data and do not necessarily reflect competitive dynamics in the market.

Gas reciprocating engines for power generation v. gas turbines

- 19. Dresser is not present in gas turbines, while GE currently only offers gas turbines above 10MW. Turbines are machines driven by the pressure, momentum or reactive thrust of steam, water air or gas against a wheel or rotor. Turbines can be used either to produce electricity or to power mechanical equipment. The range of gas turbines that is available in terms of MW is significantly larger than gas reciprocating engines.<sup>8</sup>
- 20. With regard to turbines, the parties submit that gas reciprocating engines and turbines do not belong to the same product market. Gas engines are more efficient in fuel consumption than gas turbines on average, a gas engine burns 20-30% less fuel than a gas turbine. They also submit that a turbine has significantly fewer moving parts than a reciprocating engine, and that these moving parts all move together, causing significantly less stresses to the machine's components. Thus, it has a higher availability and reliability than a reciprocating engine, and it requires significantly less maintenance. A gas turbine produces more heat than a gas reciprocating engine, whereas a reciprocating engine tends to have a higher electrical output compared to a turbine. Thus, gas reciprocating engines are preferred by customers who value electrical output more than heat output, such as hospitals, universities or SMEs. In addition, in mechanical drive applications, reciprocating engines are used in different applications compared to turbines. Finally, the parties submit that the purchase price of a gas turbine would, on average, be approximately 15-30% more expensive than a gas reciprocating engine.
- 21. The Commission's market investigation has indicated that reciprocating engines compete with gas turbines for electricity generation only to a very limited degree, where the characteristics of price, operating cost and output overlap. However, for projects below 10MW and which do not allow waste heat to be utilized, end customers prefer gas engines

<sup>&</sup>lt;sup>8</sup> For example, GE offers gas turbines up to 480MW.

over turbines as they are more efficient and require less sophisticated operational and support service capability. In contrast, gas turbines offer high power density, lower emissions and a lower overall maintenance burden. Thus, end customers find them better suited to larger projects (above 10MW).

## IV.1.2. Gas gensets

- 22. A gas genset is in essence a standalone electricity generator powered by a gas engine. Gas engines<sup>9</sup> are one of the most significant components of gas gensets. Approximately 60-65% of the value of the genset is accounted for by the value of the gas engine. In addition, the design and characteristics of the engine determines the efficiency, output and emissions of the genset.
- 23. The parties submit that competition for gensets is effectively competition for gas engines since the customer's preferences are primarily driven by the performance of the engine. The parties also indicate that most suppliers of gas engines, including GE and Dresser, source the generator and other additional components for gensets from third parties.
- 24. The Commission has so far not looked specifically at gas gensets but has already assessed diesel gensets, which are also used as standalone electricity generators but run on diesel instead of gas.<sup>10</sup> The Commission has viewed the diesel gensets market a possible single relevant product market but did not reach a definitive conclusion in this respect.
- 25. Given that a gas engine is a key component of a gas genset that determines the gensets' operating conditions and in line with the Commission's market investigation, the above consideration concerning possible distinctions within gas engines apply to gas gensets as well.

# Geographic market definition

- 26. Finally, in geographic terms, in line with the Commission's precedent, the parties submit that the relevant geographic market is at least EEA-wide, and probably global, given that conditions of competition are generally homogeneous across regions.<sup>11</sup> The parties indicate that technical requirements relating to types of reciprocating engines, customer preferences, price and environmental requirements are similar across Europe, and even globally. The parties also submit that there are no national preferences, brands, regulatory, transport or technical barriers that prevent competition across borders.
- 27. The market investigation indicated that compliance to different technical standards and different certification procedures, emission legislations and fuel availability and pricing may vary globally. However, these differences only lead to manufacturing adjustments and do not affect the worldwide trade of the engines. In addition, transport costs only represent 2-5% of the final sales price of gas gensets. Thus, several of the parties' main competitors, which are located both within and outside the EEA, have indicated that they supply engines to countries inside and outside the EEA.

<sup>&</sup>lt;sup>9</sup> Together with associated control systems that monitor and control the functioning of the engine and are normally proprietary to the engine manufacturer and supplied by the engine supplier.

<sup>&</sup>lt;sup>10</sup> See Case No. IV/M.700 – *EMERSON/CATERPILLAR* of 24 April 1996.

<sup>&</sup>lt;sup>11</sup> See Case COMP/M.3113 – *GE/Jenbacher* of 14 April 2003, recital 11.

28. For the purpose of this case, it is not necessary to reach a definitive conclusion concerning the relevant product or geographic market for reciprocating gas engines and gas gensets since the proposed transaction does not raise competition concerns under any conceivable product or geographic market definition.

## V. COMPETITIVE ASSESSMENT

#### Horizontal overlaps

29. Horizontally affected market(s) arise(s) only with respect to gas gensets. If all gas gensets (i.e. with output 0-20MW) are considered as the relevant product market, the transaction gives rise to horizontally affected markets both in the EEA and globally but the increment is very low. The table below shows the parties' best estimates<sup>12</sup> concerning share data on the basis of such a hypothetical market definition for 2009:<sup>13</sup>

Competitor	Worldwide Shares	EEA
GE Jenbacher	[20-30]%	[30-40]%
Dresser Waukesha	[0-5]%	[0-5]%
Parties	[20-30]%	[30-40]%
Wärtsilä	[10-20]%	-
Caterpillar	[10-20]%	[5-10]%
MWM	[10-20]%	[20-30]%
Cummins	[0-5]%	[5-10]%
MAN	[0-5]%	[0-5]%
TOGNUM-MTU	[0-5]%	[5-10]%
Rolls Royce	[0-5]%	[5-10]%
Guascor	[0-5]%	[0-5]%
Others	[5-10]%	[5-10]%
Total market (MW)	[]	[]

- 30. On a worldwide basis, Dresser is a small supplier of gas gensets, with a share of approximately [0-5]%. In the EEA, Dresser's position is even weaker than on a worldwide basis, showing a share of approximately [0-5]%. The parties further submit that the parties are not close competitors. GE rarely competes in bids against Dresser for power generation projects in the EEA, where Dresser's presence is minimal.
- 31. The Commission's market investigation confirmed that several strong (vertically integrated) competitors exist in the EEA and the world and will continue to constrain the merged entity on the market for the supply of gas gensets, notably Caterpillar, MWM, Cummins, MAN and Tognum-MTU. Unlike Dresser, most of these vertically integrated competitors have production facilities in Europe. Dresser closed its Dutch production facility in 2005 and currently has no sales forces in the EEA for gas gensets, except a single general marketing employee. There are also numerous non-integrated packagers and

<sup>&</sup>lt;sup>12</sup> The parties submit that the estimates provided are very approximate since they do not collect this data in the normal course of business.

<sup>&</sup>lt;sup>13</sup> The parties submit that measuring shares on the basis of MW gives a better indication of a manufacturer's relative performance in any given year than using a figure based on the number of units sold. The number of units sold may also change significantly from one year to another given that gensets manufacturers may slightly increase the output of one or more of their models in any given year.

distributors that are additional suppliers of gas gensets, such as SDMO/Kohler (France), Koehler & Ziegler Alagentechnik GmbH (Germany), 2G Bio-Energietechnik AG (Germany), TEDOM (Czech Republic), Kohler (the USA) and Stemac (Brazil). According to the parties, the individual market share of each of these suppliers does not exceed 2%. It therefore appears that the addition of Dresser's minimal share is not material enough to change the nature of competition taking place between GE and the other manufacturers.

- 32. Furthermore, the impact of the proposed transaction on competition in gas gensets will be limited due to the fact that Dresser is not a close competitor of GE. Customers in the EEA perceive Dresser's products to be less sophisticated than GE's. Many of GE's engines offer higher efficiency rates than Dresser's, which is of importance to the EEA customers in particular, as they value the engine's efficiency particularly highly since it leads to fuel savings and lower emissions. Efficiency can be improved by technical improvements and innovations of the engine and GE is known for continuously investing in R&D, whereas Dresser's products are less innovative. Dresser does not focus its sales efforts in the area of power generation in Europe but instead focuses on North America and a few developing countries. Many of its customers are in the oil and gas industry, where robust, simpler engines with a lower efficiency rate are more attractive. Moreover, gas prices in these countries tend to be lower (or non-existent in case of landfill gas) than in the EEA and/or environmental factors are less important.
- 33. The parties estimate that their market shares would be similar or lower if any other distinction mentioned above is applied. In particular, the parties' combined market shares would be much lower if they were measured for all reciprocating engines for industrial applications in the 0-20MW range using all types of fuel (*i.e.* gaseous and liquid). The parties submit that this is also true if the market was to include gas engines for all industrial applications (*i.e.* including mechanical drive applications), as opposed to gas engines for power generation only, or if the market was to include gas turbines. GE's market share in different output ranges would be slightly higher in some instances than illustrated in the table above, but Dresser is either not present in these segments or its share is minimal.
- 34. It can therefore be concluded that any horizontal overlaps in the parties' activities do not give rise to competition concerns.

#### Vertical relationship

- 35. As indicated above, only Dresser is active in the upstream market for the supply of bare gas reciprocating engines for power generation to third parties, whereas GE is vertically integrated into the production of gas gensets. In 2009, Dresser received orders amounting to [...]MW ([...] units) of bare engines in the EEA (as compared to [...]MW / [...] units for gas gensets) and [...]MW ([...] units) on a worldwide level (as compared to [...]MW / [...] units for gas gensets). The market investigation indicated that the total demand for bare gas engines was at least 400 MW in the EEA in 2009 or around 25% of total demand for power generation in the EEA (gas gensets and bare gas engines), of which Dresser's share is thus less than [0-5]%.
- 36. Dresser's distributors of gas engines (who are also packagers) are typically [details about Dresser's contractual relationship with distributors concerning the sale of engines and maintenance services], and are required to have certified technicians. The parties submit that Dresser's distributors may, and many in fact do, carry engine models of other manufacturers in other power ranges. Dresser also enters into contracts with packagers that are not Dresser's distributors but sales of bare engines to such packagers are less frequent.

- 37. Dresser's activities in the upstream market for the sale of bare gas engines are not significant and the parties estimate Dresser's market share at well below 15% in the EEA and below 20% globally. The market share figures even seem to be somewhat overestimated, as the market investigation has shown that other significant suppliers of bare gas engines are MAN, Cummins, Caterpillar/Perkins, Mitsubishi and Scania.
- 38. The Commission's market investigation confirmed that there are several important suppliers of bare gas engines, for which the sale of bare engines is actually an important part of their business. Even though Dresser's customers have been bound to Dresser for several years and trained specifically for Dresser's gas engines, it appears that they would have access to bare engines as input for gas gensets from other suppliers. There are sufficient other suppliers that they could turn to, should the merged entity decide to entirely internalise the production of gas gensets. Given their significant know-how in the engines field, it seems that such a transition would be feasible, even though it might require additional investment to acquire technical expertise unique to each new gas engine.
- 39. Furthermore, based on the parties' estimates (and lack of evidence to the contrary), Dresser's bare engines customers represent a minimal percentage in the overall gas gensets sales, namely [0-5]% in the EEA and [0-5]% globally. Even in a foreclosure scenario, there would be no significant harm to effective competition since these gas genset suppliers do not play a sufficiently important role in the competitive process on the downstream market for the supply of gas gensets. In addition, competition appears strong in the gas genset market with a number of strong players and it thus seems unlikely that the merged entity could profitably increase prices charged to ultimate customers of gas gensets as a result of any foreclosure. There remain sufficient credible downstream competitors whose costs are not likely to be raised because they are themselves vertically integrated.
- 40. It follows that the proposed transaction does no raise any foreclosure concerns.

## V.I. CONCLUSION

41. For the above reasons, the European Commission has decided not to oppose the notified operation and to declare it compatible with the internal market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of the Merger Regulation.

For the Commission (Signed) Joaquín ALMUNIA Vice-President