

AERCAP HOLDINGS N.V.

NOTICE OF THE ANNUAL GENERAL MEETING OF SHAREHOLDERS

Notice is hereby given of the annual general meeting of shareholders of AerCap Holdings N.V. (the "Company") to be held on Thursday 27 May 2010 at 2:00 p.m. (Amsterdam time) at the offices of the Company at AerCap House, Stationsplein 965, 1117 CE Schiphol, The Netherlands.

The agenda for the meeting, containing proposals made by the Board of Directors, is as follows:

- 1. Opening.
- 2. Report of the Board of Directors on the financial year 2009 (for discussion).
- 3. Adoption of the annual accounts for the financial year 2009 (voting item).
- 4. Reservation and dividend policy (for discussion).
- 5. Discharge of the directors (*leden raad van bestuur*) in respect of their management during the financial year 2009 (voting item).
- Appointment of (a) Mr. Michael Gradon (voting item), (b) Mr. Niall Greene (voting item) and (c) Mr. Paul T. Dacier (voting item) as (non-executive) directors for a term of four years.
 - Re-appointment of (d) Mr. Robert G. Warden (voting item), (e) Mr. Gerald P. Strong (voting item) and (f) Mr. W. Brett Ingersoll (voting item) as (non-executive) directors for an additional term of four years.
 - Re-appointment of (g) Mr. Klaus W. Heinemann (executive director and CEO) as director for an additional term of one year (voting item).
- 7. Amendment to the remuneration policy for the non-executive directors (voting item).
- 8. Designation of Mr. Keith A. Helming as the person referred to in article 16 paragraph 8 of the articles of association (voting item).
- 9. Appointment of PricewaterhouseCoopers Accountants N.V. as the registered accountants (voting item).
- 10. Authorization of the Board of Directors to repurchase shares (voting item).
- 11. Amendment to the articles of association and designation of each of the Company's directors and each lawyer working at NautaDutilh N.V. to implement the amendment to the articles of association (voting item).

- 12. Questions.
- 13. Closing.

Copies of the agenda for the meeting, stating the subjects to be considered - including the amendment to the Company's articles of association - and the other meeting documents can be obtained free of charge by shareholders and others entitled to attend the meeting and their representatives as of today until the close of the meeting at the offices of the Company and at American Stock Transfer & Trust Company, 6201 15th Avenue, Brooklyn, New York 11219, U.S.A. (attention shareholder services) and are also available free of charge during the meeting. Copies of these documents are also available on the Company's website (www.aercap.com).

The Board of Directors has determined that only shareholders who are shareholders on 28 April 2010, close of business (the "registration date") and who are registered in one of the Company's shareholders' registers on that date, or have a valid proxy from such a shareholder, may attend and vote at the annual general meeting of shareholders.

For the convenience of the Company's shareholders, the Company will mail this notice of the annual general meeting of shareholders, the explanation to the agenda, the annual report for the financial year 2009, the annual accounts for the financial year 2009 and the draft amendment of the Company's articles of association together with a proxy form (the "proxy materials") to shareholders who are registered in the Company's shareholders' registers and to beneficial holders of the Company's shares who hold their shares indirectly through the Depositary Trust Company (collectively, the "investors") who owned their registered or beneficial shares (collectively, the "shares") on 30 March 2010. This mailing will allow investors more time to read and consider the proxy materials. However, such investors' votes will not count unless they remain investors on the registration date, 28 April 2010.

The Company will make a second distribution of the proxy materials on the registration date, 28 April 2010, to investors who acquired their shares after 30 March 2010 to ensure that all investors who own the Company's shares on 28 April 2010 have an opportunity to vote.

In both cases, investors who receive the proxy materials should vote promptly after they receive the proxy materials in accordance with the voting instructions contained in the proxy materials to allow sufficient time for the proxies to be received and tabulated.

Investors who beneficially hold shares in the Company through the Depositary Trust Company wishing to exercise their meeting rights by submitting a proxy must return the proxy contained in the proxy materials in accordance with the instructions set forth therein no later than 5:00 p.m. (New York time) on 21 May 2010. Investors who beneficially hold shares in the Company through the Depositary Trust Company wishing to exercise their meeting rights in person must (i) notify the Company by submitting their name and number of beneficial the Company's shares through e-mail address shareholdersmeeting@aercap.com no later than 5:00 p.m. (New York time) on 21 May 2010 and (ii) provide the Company with appropriate evidence of ownership of and authority to vote the shares no later than 21 May 2010.

Investors who are registered in the Company's shareholders' registers wishing to exercise their meeting rights, in person or by proxy, must (i) notify the Company by submitting their name and number of registered shares through the Company's e-mail address at shareholdersmeeting@aercap.com by no later than 5:00 p.m. (Amsterdam time) on 21 May 2010 or, as the case may be, use (ii) the proxy form that can be obtained from the Company. The proxy forms need to be received by the Company no later than 5:00 p.m. (Amsterdam time) on 21 May 2010.

Access to the annual meeting of shareholders by an investor or proxy holder is permitted after verification of personal identification.

For further information please see www.aercap.com.

Requests for information can also be sent to: Shareholdersmeeting@aercap.com

The Board of Directors

31 March 2010