

FLOWSERVE CORPORATION



April 19, 2017

Dear Fellow Shareholder,

We are pleased to announce that the Corporate Governance and Nominating Committee of the Board of Directors of Flowserve Corporation has revised its slate of nominees for election to the Board of Directors at Flowserve's Annual Meeting of Shareholders on May 18, 2017 to include Ruby Chandy as an additional nominee.

Because this change affects the matters to be voted on at the annual meeting, we are providing additional information in the enclosed Supplement to Proxy Statement, and an amended proxy card to enable shareholders to vote on the election of Ms. Chandy to a one-year term on our Board expiring at Flowserve's 2018 annual meeting of shareholders. For technical purposes, the election of Ms. Chandy as a director is being considered as a separate proposal (Proposal Six). Please read the proxy statement that was previously made available to shareholders and the enclosed Supplement to Proxy Statement in their entirety, as together they contain information that is important to your decisions in voting at the annual meeting.

The time and place of the annual meeting have not changed. The annual meeting will be held on Thursday, May 18, 2017 at 11:30 a.m., local time, at the Flowserve Corporation Global Technology and Training Center, which is located at 4343 West Royal Lane, Irving, Texas 75063.

You are entitled to notice of, and to vote at, the annual meeting and any postponement or adjournment of the annual meeting if you were a shareholder of record at the close of business on March 23, 2017. It is important that your shares be voted, whether or not you plan to attend the annual meeting, to ensure the presence of a quorum. Therefore, if you have not submitted a proxy card yet or wish to vote on the election of Ms. Chandy as a director, please complete, sign, date and return the enclosed amended proxy card in the enclosed postage-paid envelope or vote by Internet. Please note that if you submit a new proxy card it will revoke all prior proxy cards you have submitted, so it is important to indicate your vote on each proposal on the new proxy card. If you have already voted and do not submit new voting instructions, your previously submitted proxy will be voted at the annual meeting with respect to all other proposals, but will not be counted in determining the outcome of the election of Ms. Chandy to our Board. Returning the proxy does not deprive you of your right to attend the annual meeting and vote your shares in person for the matters acted on at the annual meeting.

I hope to see you at the meeting. Thank you in advance for voting and for your continued support of Flowserve.



A handwritten signature in black ink, appearing to read "William C. Rusnack".

William C. Rusnack
*Chairman of the
Board of Directors*

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Amended Notice of Annual Meeting of Shareholders

The 2017 Annual Meeting of Shareholders (the "Annual Meeting") of Flowserve Corporation (the "Company") will be held on **Thursday, May 18, 2017 at 11:30 a.m.**, local time, at the Flowserve Corporation Global Technology and Training Center, which is located at 4343 West Royal Lane, Irving, Texas 75063. Directions to the Annual Meeting and a map of the area are included on the back cover of the accompanying supplement to the proxy statement and are also available online at www.proxyvote.com.

Shareholders of record of the Company's common stock, par value \$1.25 per share, at the close of business on March 23, 2017 are entitled to notice of and to vote at the Annual Meeting.

At the Annual Meeting, shareholders will vote on the following matters either in person or by proxy:

- the election of eight directors, each to serve a term expiring at the 2018 annual meeting of shareholders;
- an advisory vote to approve the Company's executive compensation;
- an advisory vote on how often the Company conducts the advisory "say on pay" vote, with the Company recommending an annual vote;
- ratification of the appointment of PricewaterhouseCoopers LLP to serve as our independent registered public accounting firm for 2017;
- a shareholder proposal, if properly presented;
- the election of Ruby Chandy, to serve a term expiring at the 2018 annual meeting of shareholders; and
- transaction of any other business properly presented at the Annual Meeting.

The proxy statement previously made available to shareholders and the accompanying supplement to proxy statement contain other important information that you should read and consider before you vote.

In accordance with Securities and Exchange Commission rules, we are furnishing proxy materials to our shareholders on the Internet, rather than by mail. We believe this e-proxy process expedites our shareholders' receipt of proxy materials, lowers our costs and reduces the environmental impact of our Annual Meeting. The proxy statement, annual report to shareholders, the supplement to proxy statement and any other proxy materials are available on our hosted website at www.proxyvote.com. For additional related information, please refer to the "Important Notice of Electronic Availability of Materials for the Shareholder Meeting to be held on May 18, 2017" in the proxy statement made available to shareholders on or about April 7, 2017.

Your vote is important, and whether or not you plan to attend the Annual Meeting, your prompt cooperation in voting is greatly appreciated. We encourage you to vote via the Internet. It is convenient and saves us significant postage and processing costs. You may also vote via telephone or by mail if you received paper copies of the proxy materials. Instructions regarding all three methods of voting are included in the amended Notice of Internet Availability of Proxy Materials, the amended proxy card and the proxy statement previously made available to shareholders.

By Order of the Board of Directors,

A handwritten signature in black ink that reads "Carey A. O'Connor". The signature is written in a cursive style with a large, prominent "C" at the beginning.

Carey A. O'Connor

Senior Vice President, General Counsel and Corporate Secretary

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SUPPLEMENT TO PROXY STATEMENT FOR THE 2017 ANNUAL MEETING OF SHAREHOLDERS

Flowserve Corporation

5215 N. O'Connor Blvd., Suite 2300
Irving, Texas 75039

This Supplement to Proxy Statement ("Supplement") supplements and amends the Proxy Statement dated April 7, 2017 (the "Proxy Statement") of Flowserve Corporation (the "Company"), previously furnished to our shareholders in connection with the solicitation of proxies on behalf of the Board of Directors of the Company for use at the Annual Meeting of Shareholders to be held on May 18, 2017 (the "Annual Meeting"), or any adjournment or postponement thereof. This Supplement, which should be read in conjunction with the Proxy Statement, is first made available to shareholders on or about April 19, 2017. Except as specifically supplemented or amended by the information contained in this Supplement, all information set forth in the Proxy Statement continues to apply and should be considered in voting your shares.

THE PROXY STATEMENT CONTAINS IMPORTANT INFORMATION AND THIS SUPPLEMENT SHOULD BE READ IN CONJUNCTION WITH THE PROXY STATEMENT.

The Annual Meeting will be held at Thursday, May 18, 2017 at 11:30 a.m., local time, at the Flowserve Corporation Global Technology and Training Center, which is located at 4343 West Royal Lane, Irving, Texas 75063. Shareholders of record of the Company's common stock, par value \$1.25 per share, at the close of business on March 23, 2017 are entitled to notice of and to vote at the Annual Meeting.

CHANGE IN CANDIDATES NOMINATED BY THE BOARD OF DIRECTORS

On April 7, 2017, the Company filed its Proxy Statement with the Securities and Exchange Commission and began mailing the Proxy Statement to shareholders of record. Subsequent to that date, the Corporate Governance and Nominating Committee of the Board of Directors (the "Committee") authorized a revised slate of nominees for election to the Board of Directors at the Annual Meeting. As discussed further below, the revised list of candidates nominated by the Committee consists of all of the nominees identified in the Proxy Statement, with the addition of Ms. Chandy. After the Annual Meeting, the Board will reduce the number of directors to the number of nominees elected at the Annual Meeting. We are also providing an amended proxy card to enable shareholders to vote on the revised nominees for election as directors, including Ms. Chandy.

The amended proxy card enclosed with this Supplement differs from the proxy card previously furnished to you with the Proxy Statement, in that the enclosed amended proxy card includes the name of Ruby Chandy as a director nominee in additional Proposal Six. If you have voted already, we encourage you to resubmit your vote on all six proposals by submitting the amended proxy card enclosed with this Supplement or by submitting a proxy via the Internet or by telephone by following the procedures on your amended proxy card. However, if you return, or have returned, an original proxy card, your proxy will still remain valid for all of the other proposals and director nominees except Ms. Chandy because she is not listed as a nominee on the original proxy card, and will be voted at the Annual Meeting unless revoked. **PLEASE NOTE THAT IF YOU SUBMIT A NEW PROXY CARD, IT WILL REVOKE ALL PRIOR PROXY CARDS, SO IT IS IMPORTANT TO INDICATE YOUR VOTE ON EACH PROPOSAL ON THE NEW PROXY CARD.**

PROPOSAL SIX: ELECTION OF ADDITIONAL DIRECTOR

The Proxy Statement with respect to the 2017 Annual Meeting is supplemented and amended to provide that the Committee, in accordance with our By-laws, has nominated Ruby Chandy to serve as a director for a one year term expiring at our 2018 annual meeting of shareholders as Proposal Six, in addition to the following nominees listed in Proposal One: R. Scott Rowe, Leif E. Darnier, Gayla J. Dely, Roger L. Fix, John R. Friedery,

Joe E. Harlan, Rick J. Mills, and David E. Roberts. Biographical information with respect to all nominees other than Ms. Chandy is set forth in the Proxy Statement under the caption "Proposal One - Election of Directors- Board of Directors - Biographical Information". Ms. Chandy's Biographical information is set forth below. As of April 19, 2017, Ms. Chandy did not beneficially own any Company common stock.

Required Vote and Recommendation

As discussed in the Proxy Statement, our By-laws require that, in an uncontested election, each director will be elected by a vote of the majority of the votes cast. A majority of votes cast means that the number of shares cast "for" a director's election exceeds the number of votes cast "against" that director. We will not treat any share as having cast a vote on this proposal (a) where the ballot is marked as withheld, (b) if it is otherwise present at the Annual Meeting but there is an abstention or (c) where a shareholder gives no authority or direction. In a contested election, the directors will be elected by a plurality of the votes cast, meaning the directors receiving the largest number of "for" votes will be elected to the open positions.

In an uncontested election, any nominee for director who duly holds office as a director under the By-Laws and does not receive an affirmative vote of a majority of the votes cast in favor of or against such nominee is required to tender his or her resignation promptly after such election. The independent directors of the Board, giving due consideration to the best interests of the Company and our

shareholders, will then evaluate the relevant facts and circumstances and make a decision, within 30 days after the election, on whether to accept the tendered resignation. Any director whose resignation is under consideration is prohibited from participating in the Board's decision. The Board will promptly disclose publicly its decision and, if applicable, the reasons for rejecting the tendered resignation. The Board may fill any vacancy resulting from a director's accepted resignation, as provided in our By-laws.

Broker non-votes will not be considered to have voted on this proposal and will therefore have no effect on the proposal.

The individuals named as proxies on the enclosed amended proxy card will vote your proxy "FOR" the election of these nominees unless you instruct otherwise or you withhold authority to vote for any one or more of them. If any director is unable to stand for re-election, the Board may reduce the number of directors or choose a substitute. The nominees have indicated their willingness to serve as directors, and we have no reason to believe any nominee will not be able to stand for re-election.

The Board recommends that you vote "FOR" the election of Ms. Chandy and all other nominees named in the Proxy Statement to serve as directors.



Ruby Chandy, age 55, was the President of the Industrial Division of Pall Corporation, a leading supplier of filtration, separation, and purification technologies, from April 2012 to November 2015. Previously, she was Managing Director, Vice President of Dow Plastics Additives, a unit of The Dow Chemical Company, a multinational chemical corporation, from 2011 to April 2012.

Ms. Chandy is currently a director of AMETEK, Inc., a manufacturer of electronic instruments and electromechanical devices, serving

since May 2013. She served as a director of IDEX Corporation, a designer and manufacturer of fluidics systems and specialty engineered products, from April 2006 until April 2013.

We believe Ms. Chandy is well qualified to serve as a director due to her executive management experience and marketing and strategy skills, relevant experience in industrial companies, and extensive engineering and management education, which provides an intimate understanding of the Company's customers and its operational challenges and opportunities.

CHANGING YOUR VOTE

Please vote as soon as possible using the amended proxy card enclosed with this Supplement if you would like to change your vote or if you have not voted yet. The amended proxy card differs from the original proxy card previously furnished to you in that the enclosed proxy card includes the name of Ruby Chandy as a nominee as an additional Proposal Six. If you have already returned your original proxy card, you do not need to submit the amended proxy card unless you would like to vote on the revised slate of director nominees, including Ms. Chandy. If you return, or have returned, an original proxy card, your proxy will remain valid for all of the other proposals and director nominees except Ms. Chandy because she is not listed as a nominee on the original

proxy card, and will be voted at the Annual Meeting unless revoked. The original proxy and the amended proxy are solicited on behalf of the Board of Directors and revocable at any time before they have been exercised at the Annual Meeting by:

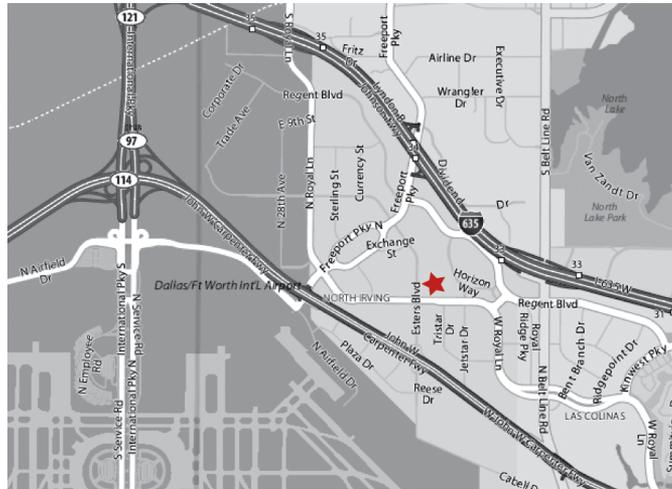
- timely mailing in a revised proxy dated later than the prior submitted proxy;
- timely notifying the Corporate Secretary in writing that you are revoking your proxy;
- timely casting a new vote by telephone or the Internet; or
- if you are a holder of record, appearing in person and voting by ballot at the Annual Meeting.

OTHER MATTERS

Other than as set forth above, no items presented in the Proxy Statement are affected by this Supplement, and you should carefully review the Proxy Statement prior to voting your shares. For more information relating to the Proxy Statement, voting or solicitation, please refer to “Proxy Statement for the 2017 Annual Meeting of Shareholders—Solicitation” and “—Voting” in the Proxy Statement.

The Company knows of no other matters to be submitted to the shareholders at the Annual Meeting. If any other matters properly come before the shareholders at the Annual Meeting, it is the intention of the persons named on the enclosed proxy card to vote the shares represented thereby on such matters in accordance with their best judgment.

**Map and Driving Directions to
The Flowserve Corporation Global Technology and Training Center**



Instructions from Dallas/Fort Worth International Airport (DFW):

- Take the north exit from the airport to John Carpenter Freeway (Highway 114) heading east
- Exit Esters Boulevard and turn left onto Esters Boulevard
- The Flowserve Corporation Global Technology and Training Center is on the northeast corner of Esters Boulevard and West Royal Lane

Instructions from Downtown Dallas:

- Take Interstate Highway 35E heading north
- Take the left fork onto Highway 183 toward IRVING (Highway 114)/DFW AIRPORT
- Take the right fork onto John W. Carpenter Freeway (Highway 114) toward GRAPEVINE/DFW AIRPORT NORTH ENTRY and continue west in one of the outside lanes until you reach the Esters Boulevard exit
- Exit Esters Boulevard and turn right onto Esters Boulevard
- The Flowserve Corporation Global Technology and Training Center is on the northeast corner of Esters Boulevard and West Royal Lane