

DOW CHEMICAL CO /DE/
 Form 424B3
 June 23, 2014

The information in this preliminary pricing supplement is not complete and may be changed. This preliminary pricing supplement and the accompanying prospectus supplement and prospectus are not offers to sell these securities and are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion

Preliminary Pricing Supplement dated June 23, 2014

Filed under 424(b)(3), Registration Statement No. 333-186728

Pricing Supplement No. 172 - Dated Monday, June 23, 2014

(To: Prospectus Dated February 19, 2013, and Prospectus Supplement Dated February 19, 2013)

| SIP Number | Principal Selling Amount | Price | Gross Concession | Net Proceeds | Coupon Rate | Coupon Frequency | Maturity Date | 1st Coupon Date | 1st Coupon Amount | Survivor Option | Product Ranking |
|------------|--------------------------|-------|------------------|--------------|-------------|------------------|---------------|-----------------|-------------------|-----------------|------------------------|
| 54LXM0 | 100% | | 1.250% | | 2.250% | Semi-Annual | 07/15/2019 | 01/15/2015 | \$ 12.00 | Yes | Senior Unsecured Notes |

Redemption Information: Callable at 100% on 07/15/2015 and every coupon date thereafter

Lead Managers and Lead Agents: BofA Merrill Lynch, Incapital LLC **Agents:** Citi, Merrill Lynch, Morgan Stanley, UBS Securities LLC, Wells Fargo Advisors, LLC

The Dow Chemical Company InterNotes will be subject to redemption at the option of The Dow Chemical Company, in whole on the interest payment date occurring on 07/15/2015 and on any interest payment date thereafter at a redemption price equal to 100% of the principal amount of the The Dow Chemical Company InterNotes plus accrued interest thereon, if any, upon at least 30 days prior notice to the holder and the trustee, as described in the prospectus.

| | | | | | | | | | | | |
|--------|------|--|--------|--|--------|-------------|------------|------------|----------|-----|------------------------|
| 54LXN8 | 100% | | 1.450% | | 2.950% | Semi-Annual | 07/15/2021 | 01/15/2015 | \$ 15.73 | Yes | Senior Unsecured Notes |
|--------|------|--|--------|--|--------|-------------|------------|------------|----------|-----|------------------------|

Redemption Information: Callable at 100% on 07/15/2015 and every coupon date thereafter

Lead Managers and Lead Agents: BofA Merrill Lynch, Incapital LLC **Agents:** Citi, Merrill Lynch, Morgan Stanley, UBS Securities LLC, Wells Fargo Advisors, LLC

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|--------|------|--------|--------|-------------|------------|------------|----------|-----|------------------------|
| 54LXP3 | 100% | 1.800% | 3.550% | Semi-Annual | 07/15/2024 | 01/15/2015 | \$ 18.93 | Yes | Senior Unsecured Notes |
|--------|------|--------|--------|-------------|------------|------------|----------|-----|------------------------|

Redemption Information: Callable at 100% on 07/15/2015 and every coupon date thereafter

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| | Trade Date: Monday, June 30, 2014 @ 12:00 | The Dow Chemical Company |
| The Dow Chemical Company 2030 Willard H. Dow Center Midland, Michigan 48674 | PM ET Settle Date: Thursday, July 3, 2014 | The Dow Chemical Company InterNotes |
| | Minimum Denomination/Increments: \$1,000.00/\$1,000.00 | |
| | Initial trades settle flat and clear SDFS: DTC Book Entry | |
| | only DTC Number 0235 via RBC Dain Rauscher Inc | |
| | If the maturity date or an interest payment date for any note is not a business day (as term is defined in prospectus), principal, premium, if any, and | |

interest for that note is paid on the next business day, and no interest will accrue from, and after, the maturity date or interest payment date.

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