

PROSPECTUS SUPPLEMENT NO. 1
(To Prospectus dated April 5, 2022)

89,684,845 Shares of Common Stock
7,666,667 Warrants



This prospectus supplement supplements the prospectus dated April 5, 2022 (the "Prospectus"), which forms part of our Registration Statement on Form S-1 (No. 333-261711) for which Post-Effective Amendment No. 1 was filed with the Securities and Exchange Commission (the "SEC") on April 1, 2022 and declared effective by the SEC on April 5, 2022.

The Prospectus relates to the offer by us, and the resale by the Selling Securityholders (as defined in "Selling Securityholders" in the Prospectus) of up to: (i) 7,666,667 shares of common stock, par value \$0.0001 per share, of Solid Power, Inc. ("Common Stock") issuable upon the exercise of an aggregate of 7,666,667 warrants held by Decarbonization Plus Acquisition Sponsor III LLC, a Delaware limited liability company (the "Sponsor"), and certain former independent directors, each of which is exercisable at a price of \$11.50 per share (collectively, the "Private Placement Warrants") and (ii) up to 11,666,636 shares of Common Stock issuable upon the exercise of 11,666,636 warrants, each of which is exercisable at a price of \$11.50 per share (the "Public Warrants").

The Prospectus also relates to the resale from time to time by the Selling Securityholders of up to: (i) 45,760,373 shares of Common Stock consisting of (a) an aggregate of 8,750,000 shares of Common Stock held by the Sponsor and certain former independent directors and (b) an aggregate of 37,010,373 shares of Common Stock beneficially owned by certain former stockholders of Solid Power Operating, Inc., (ii) an aggregate of 19,500,000 shares of Common Stock purchased at Closing (as defined in the Prospectus) by a number of subscribers pursuant to separate subscription agreements, (iii) 5,091,169 shares of Common Stock issued to Douglas Campbell upon his exercise of options to purchase shares of Common Stock and (iv) the 7,666,667 Private Placement Warrants.

Our Common Stock and Public Warrants are listed on the Nasdaq Global Select Market under the symbols "SLDP" and "SLDPW," respectively. On May 2, 2022, the closing price of our Common Stock was \$8.15 and the closing price for our Public Warrants was \$1.86.

We are filing this prospectus supplement to update certain information contained under the caption "Selling Securityholders" as set forth below to reflect the transfer of certain shares of Common Stock from a Selling Securityholder to an affiliate of such Selling Securityholder.

This prospectus supplement should be read in conjunction with the Prospectus, which is to be delivered with this prospectus supplement. This prospectus supplement updates and supplements the information included or incorporated by reference in the Prospectus. If there is any inconsistency between the information in the Prospectus and this prospectus supplement, you should rely on the information in this prospectus supplement.

This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, including any supplements to it.

We are an “emerging growth company,” as defined under the federal securities laws, and, as such, may elect to comply with certain reduced public company reporting requirements for future filings.

Investing in our securities involves a high degree of risk. In reviewing the Prospectus, you should carefully consider the matters described under the heading “*Risk Factors*” beginning on page 8 of the Prospectus.

You should rely only on the information contained in the Prospectus, this prospectus supplement or any additional prospectus supplements to the Prospectus. We have not authorized anyone to provide you with different information.

Neither the SEC nor any state securities commission has approved or disapproved of these securities or determined if the Prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is May 2, 2022.

SELLING SECURITYHOLDERS

The table appearing under the caption "Selling Securityholders" on page 94 of the Prospectus is hereby amended by deleting reference to "Spring Creek Capital, LLC" and replacing it with "Wood River Capital, LLC." In addition, footnote 5 to the table appearing under the caption "Selling Securityholders" on page 94 is hereby replaced with the following:

"(5) Shares offered hereby consist of 5,000,000 shares of Common Stock held directly by Wood River Capital, LLC. Wood River Capital, LLC ("Wood River") is beneficially owned by SCC Holdings, LLC ("SCC"), SCC is beneficially owned by KIM, LLC ("KIM"), KIM is beneficially owned by Koch Investments Group, LLC ("KIG"), KIG is beneficially owned by Koch Investments Group Holdings, LLC ("KIGH"), and KIGH is beneficially owned by Koch Industries, Inc. ("Koch Industries"), in each case, by means of ownership of all voting equity instruments. Koch Industries, SCC, KIM, KIG, and KIGH may be deemed to have voting and dispositive power with respect to the shares held by Wood River by virtue of (i) Koch Industries' beneficial ownership of KIGH, (ii) KIGH's beneficial ownership of KIG, (iii) KIG's beneficial ownership of KIM, (iv) KIM's beneficial ownership of SCC and (v) SCC's beneficial ownership of Wood River.
