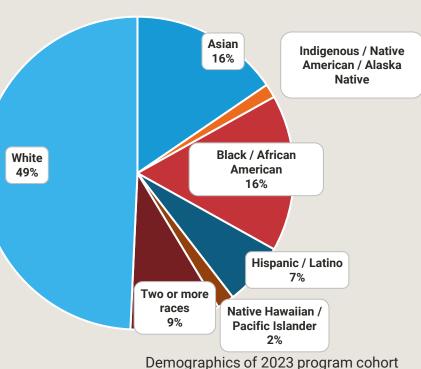


## Executing Pilots to Reduce Commercial Risk



- Focused Recruitment of Underrepresented and Undersupported Entrepreneurs
- Comprehensive Support to 4-6 Hard-tech Startups
- Industry Partners as Mentors and Pilot Host
- Pilot Execution to Reduce Commercial Risk
- 24 to 30 Month Engagement
  - Total Financial Support \$300 \$400K (\$100K in grants/in-kind support, \$100K Optional Investments & up to \$200K from DOE Phase 2 Award)
  - Targeted Program Curriculum
  - Engineering & Mentorship
  - Technical & Market Expertise
  - Potential Equity Investments



| Program Focus — Addressing Commercialization Valley of Death |                                                                                                                                                                                                                                                                                                        |                                                        |                                                                                                                                                                                                                                                                                                                                              |                                   |                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                              | TRL 5                                                                                                                                                                                                                                                                                                  | TRL 6                                                  | TRL 7                                                                                                                                                                                                                                                                                                                                        | TRL 8                             | TRL 9                                                                                                                                                                                                                                           |
| Technology<br>Maturation Plan                                | Process Development                                                                                                                                                                                                                                                                                    | Viability Demonstration<br>(1/100 <sup>th</sup> Scale) | Transition to Commercial<br>(1/10 <sup>th</sup> Scale)                                                                                                                                                                                                                                                                                       | Commercial Scale<br>Demonstration | Commercial Deployment                                                                                                                                                                                                                           |
| Startup<br>Activities and<br>Objectives                      | <ul> <li>Core technology demonstration &amp; all unit operations</li> <li>Development and utilization of TEA to inform optimization (technology, experiments)</li> <li>Pilot Scale with integrated tests producing samples of final product. Process Eng. Data gathering to inform scale-up</li> </ul> |                                                        | <ul> <li>Demonstration scale plant (including all sub-systems) development, testing and final operation conditions</li> <li>Continuous integrated operation of 1/10<sup>th</sup> scale for 1,000 hours and data collection</li> <li>Document pilot performance and engage with independent engineer to obtain investor confidence</li> </ul> |                                   | <ul> <li>Detailed process model &amp;<br/>engineering deliverables to<br/>support project execution &amp;<br/>const. planning &amp; estimate</li> <li>1<sup>st</sup> commercial scale project<br/>development &amp; plant operations</li> </ul> |