TERRESTRIAL ENERGY

Terrestrial Energy Submits Graphite Topical Report to NRC, Advancing IMSR Plant Regulatory Program

September 10, 2026

~ Second of at Least Three IMSR Topical Reports the Company Expects to Submit to the NRC in 2026, Executing Against Its Regulatory Engagement Plan ~

CHARLOTTE, N.C.--(BUSINESS WIRE)--Sep. 10, 2026--

Terrestrial Energy Inc. (NASDAQ: IMSR) ("Terrestrial Energy" or the "Company"), a leader in Generation IV molten salt nuclear plants supplying electricity and high-temperature industrial heat, today announced that it has submitted its Graphite Topical Report to the U.S. Nuclear Regulatory Commission (NRC). The submission supports the regulatory basis for qualifying graphite, a central component of the IMSR Core-unit, for use in commercial plant operations.

"This submission is the second of at least three IMSR Topical Reports we intend to submit to the NRC this year. It is part of our structured program of NRC regulatory engagement that leads up to the submission of an IMSR Plant license application," said Simon Irish, CEO of Terrestrial Energy. "Graphite performance sets the service life of the IMSR Core-unit, and this submission begins the NRC review that qualifies graphite for commercial operation."

The IMSR is a graphite-moderated molten salt reactor, a configuration previously demonstrated at national laboratories in the United States. Graphite has served as a reactor moderator over decades of commercial operations, however regulators require its performance to be demonstrated for each specific reactor design — in Terrestrial Energy's case, the IMSR Core-unit — through a process known as qualification.

Terrestrial Energy's graphite qualification program is already well advanced. Over the last several years, the Company has been collecting graphite performance data at the NRG High Flux Reactor in Petten, the Netherlands, from tests of multiple nuclear graphite grades from multiple suppliers. This testing program will support the graphite qualification methodology described in the Graphite Topical Report.

The Graphite Topical Report seeks NRC approval of the Company's methodology to complete qualification of graphite for the IMSR Plant. The methodology establishes the Company's systematic approach to graphite selection, identification and resolution of information requirements, and qualification activities necessary to demonstrate graphite performance under intended IMSR Core-unit operating conditions.

In March 2026, the Company stated that it expected to submit at least three additional Topical Reports to the NRC during the year covering key and consequential areas that increase readiness for the license submissions required to construct and operate an IMSR Plant.

Each report is intended to address important regulatory matters during the pre-application phase and establish elements of the licensing basis that can support future applications. The submission is one component of a deliberately sequenced program of engineering, licensing, supply chain development, testing, and commercial project development supporting the Company's planned first commercial IMSR deployment in the early 2030s.

The Graphite Topical Report follows the Company's Postulated Initiating Events methodology Topical Report, approved by the NRC in 2026, and its Principal Design Criteria Topical Report, approved in 2025. Together, these activities demonstrate continued execution of the Company's regulatory strategy as the IMSR progresses toward commercial deployment. Approved Topical Reports establish foundational elements of the IMSR licensing basis that may be referenced in future applications without re-evaluation, reducing the scope of subsequent technical review.

The replaceable IMSR Core-unit is central to Terrestrial Energy's capital-light business model. Planned sequential Core-unit replacements on a seven-year cycle over the operating life of the IMSR Plant underpin recurring, post-construction component supply, which the Company expects to account for the majority of estimated lifetime revenue per IMSR Plant.

About Terrestrial Energy

Terrestrial Energy is a developer of Generation IV nuclear plants powered by its Integral Molten Salt Reactor (IMSR) technology, delivering innovation in efficiency, cost, versatility and functionality. The IMSR Plant is a small, modular, and designed to supply low-cost, reliable, high-temperature heat and electricity for industrial applications, including data centers and petrochemical synthesis. By extending nuclear energy beyond power markets, IMSR supports clean firm heat and power, self-reliance, grid reliability, and economic growth. Using proven molten salt technology and inexpensive standard-assay low-enriched uranium fuel, Terrestrial Energy is working with regulators, suppliers, and partners to commission first IMSR plants in the early 2030s. Learn more: terrestrialenergy.com.

Forward-Looking Statements

The statements contained in this press release that are not purely historical are forward-looking statements. These forward-looking statements include, but are not limited to, statements regarding our expectations, milestones, hopes, beliefs, intentions or strategies regarding the future. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intends," "may," "might," "plan," "possible," "potential," "predict," "project," "should," "will," "would" and similar expressions may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking.

The forward-looking statements contained in this press release are based on our current expectations and beliefs concerning future developments and their potential effects on the Company. There can be no assurance that future developments affecting the Company will be those that we have anticipated. These forward-looking statements speak only as of the date of this press release and involve a number of risks, uncertainties (some of which are beyond our control) or other assumptions that may cause actual results or performance to differ materially from those expressed or implied by these forward-looking statements. Factors that may cause actual results to differ materially from current expectations include, but are not limited to: (1) risks related to the development, manufacturing and construction of IMSR Plants and key components, including potential delays, cost overruns and contractor performance issues; (2) the Company's ability to obtain applicable regulatory approvals and licenses on a timely basis or at all; (3) the possibility that our estimates regarding lifetime revenue and gross margin of IMSR Plants and our serviceable addressable market or the underlying assumptions may prove to be incorrect; (4) the ability of management to manage growth; (5) the possibility that the Company may be adversely affected by other economic, business, and/or competitive factors, including from alternative energy technologies, energy price volatility, and competition from other advanced reactor developers; (6) potential supply chain constraints and cost inflation for specialized nuclear-grade materials and components; (7) any failure to comply with the laws and regulations governing the use, transportation, and disposal of toxic, hazardous and/or radioactive materials; (8) changes in domestic and foreign business, market, financial and political conditions, and in applicable laws and regulations, including tariffs; (9) the ability to raise additional funding in the future; (10) the outcome of any legal proceedings that may be instituted against the Company; and (11) other risk factors described herein as well as the risk factors and uncertainties described in the documents filed by the Company from time to time with the U.S. Securities and Exchange Commission (the "SEC").

The foregoing list of risk factors is not exhaustive. You should carefully consider the foregoing risk factors and the other risks and uncertainties described in the documents filed by the Company from time to time with the SEC. In addition, there may be additional risks that the Company presently knows, or that it currently believes are immaterial, that could also cause actual results to differ from those contained in the forward-looking statements. Nothing in this communication should be regarded as a representation or warranty, either express or implied, by any person that the forward-looking statements set forth herein will be achieved or that any of the contemplated results of such forward-looking statements will be achieved. You should not place undue reliance on forward-looking statements, which speak only as of the date they are made.

In addition, the information contained in this press release is provided as of the date hereof and may change, and the Company and its representatives and affiliates specifically disclaim any obligation to, and do not intend to, update or revise any forward-looking statements, whether as a result of new information, inaccuracies, future events or otherwise, except as may be required under applicable securities laws. Information contained on our website is not a part of or incorporated into this press release.

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