

## CA Vies For New Space Industry

Mihir Zaveri, Associated Press

SAN FRANCISCO (AP) — As several new private ventures to take people on trips to space come closer to becoming reality, California lawmakers are racing other states to woo the new space companies with cushy incentives.

They are debating a bill now in Sacramento that would insulate manufacturers of spaceships and parts suppliers from liability should travelers get injured or killed on a voyage, except in cases such as gross negligence or intentional wrongdoing. Last year, the state enacted a law that shields space tourism companies such as Sir Richard Branson's Virgin Galactic from similar lawsuits.

"We're still in the fledgling part of space flight and space travel, and we need people to be able to take a risk," said California Republican Sen. Steve Knight, who introduced both state bills.

Several other states — including Texas, Florida, Virginia and New Mexico — have passed similar laws, hoping to lure newcomers to the more than \$200 billion commercial space flight industry.

California's latest bill faces opposition from several lawmakers who say the state should not relax its standards since tourists should expect the ships they use to ascend to the heavens are safe. But space tourism companies say the protection is necessary if the state wants to attract and retain the industry's business.

"Someday, something is going to crash and burn," said Kathleen Allen, a professor of entrepreneurship at the University of Southern California who researches and advises new space companies. "The question is: Are we going to be able to say that's a price we pay to stretch and explore and go beyond our current limits?"

Edwin Sahakian dreamed of flying in space since he watched Buzz Aldrin and Neil Armstrong set foot on the moon almost 45 years ago. Sahakian, 50, a trucking company owner from Glendale, Calif., is one of more than 600 people who have collectively paid about \$75 million to embark on a trip in space with Virgin Galactic.

Leaving the planet is worth the risk, he said. Without incentives like limiting the ability of customers and family members to sue, he said the opportunity would never be open to him.

"I'm not under the impression that it's as safe as flying on an airliner or anything remotely like that," he said. "But I do feel like it's the safest way to go to space right now."

In April, Virgin Galactic's space ship completed its first powered flight, as its rocket engine burned for 16 seconds, propelling the ship to an altitude of 55,000 feet as it

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broke the sound barrier. The company expects to conduct flight testing this year and send people into space soon thereafter.

Other companies are also working to launch people beyond the earth's atmosphere. Billionaire entrepreneur Elon Musk's SpaceX is already ferrying cargo to the International Space Station. Last year, SpaceX signed an agreement with Nevada-based Bigelow Aerospace, which is designing inflatable space stations for research and maybe even tourists. SpaceX and other companies will provide the transportation — like airlines — and Bigelow the place to stay.

Regulatory and economic incentives play a big role in where companies choose to do business, said Andrew Nelson, the chief operating officer of XCOR, which is pursuing space tourism and hoping to conduct flight tests for its Lynx spaceship this year.

Last year, the company — which operates at Mojave Air and Spaceport in Southern California — announced it would place a research and development center and corporate headquarters in Midland, Texas, which offered economic incentives and an attractive regulatory environment, including shielding XCOR's suppliers from lawsuits.

Nelson said the company passed over Virginia, Florida, Oklahoma and California. XCOR expects the facility will create jobs and boost the local economy by millions of dollars. He said since California doesn't shield the company's supply chain and could not offer economic incentives, XCOR ruled the state out despite its talented workforce. The company will still have a smaller operation at Mojave and would consider doing more in the state if Knight's bill is enacted.

In April, New Mexico enacted a law shielding parts suppliers and manufacturers of space transport companies from liability as an incentive for Virgin Galactic and others to launch spaceships from Spaceport America, which the state had already spent more than \$200 million financing.

At a California senate committee hearing in May, several senators expressed concern over shielding manufacturers and suppliers from lawsuits, saying customers should assume the equipment functions correctly and should have redress if it doesn't.

The bill's opponents say protection against liability is unnecessary because it would be outweighed by California's historical ties to the aerospace industry and its well-educated workforce. Knight said he is trying to work out a compromise with the bill's opponents by January.

Both supporters and opponents of Knight's bill agreed developments in the space industry — possibilities include mining asteroids or placing a human colony on Mars — present exciting, uncharted possibilities.

"Everybody would like to see a big goal that got the whole country behind like we did when we went to the moon. That was an exciting time, those people who

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remember it would like to see that again," Allen said.

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