Sponsor or support prohibition legislation on solar geoengineering and weather modification

[Date]

Dear [Members of the Legislature],

[We or I] ask you to sponsor, cosponsor, or support, in the upcoming legislative session, a prohibition (not a study, a permit, or a weather-research bill) on solar geoengineering and or weather modification, weather manipulation, or any altering of the Earth's radiative balance.

Solar Geoengineering includes stratospheric aerosol injection (SAI), solar radiation modification or stratospheric radiation management (SRM), marine cloud brightening (MCB), space based sunshade (SBS) and any version of the same idea under another name. Weather modification, ionization, satellite reflection, drone dispersal, artificial-intelligence systems used to alter local weather, clouds, or precipitation induced by chemical or other means or snow, and any similar or new technology methods. The prohibition must cover the troposphere and the stratosphere.

We must at this point concentrate not only on the troposphere, but on the stratosphere, where billions of dollars in initiatives, programs, research and development, and foundation structure are being laid for full-scale engineering. The stratosphere is stably layered. The air barely moves in the vertical, so particles stay, drift, and dim sunlight far beyond the state or country that released them. A program begun there can produce termination shock if it is later stopped, and once started it is almost impossible to stop. That is why a prohibition has to be enacted before the hardware flies, as the infrastructure of deployment, patents, research and development, and funding *IS* already in place.

The larger picture

- **The deployment plan is already on paper.** Stardust Solutions, a U.S.-Israeli firm that has raised $80 million, describes a plan to disperse 1 to 10 million tons of a proprietary blend of aerosols into the stratosphere, above the altitudes where airliners normally fly. Its international application WO2026139957A2, published July 2, 2026, covers an airborne system that holds reflective powder in the fuselage, breaks clumps with compressed air and Venturi nozzles, and releases particles of about 0.1 to 1 micrometer from a modified small jet, an airliner, or a purpose-built aircraft. It is a build sheet. Florida's SB 56 already bans a private corporation from conducting that activity inside the state. A firm such as Stardust, Make Sunsets or Skyward Wildfire Technologies, Heka Clouds and Meteoric cannot lawfully do this business in Florida.

- **Research and development must be covered by the prohibition, not exempted from it**
  Seeding Operations and Atmospheric Research (SOAR) began in aerosol work for the National Center for Atmospheric Research and now holds cloud-seeding contracts across New Mexico, Utah, and Texas; New Mexico renewed its weather-control license in January 2025. Iris Aero presented the IR-1 in May 2026: an unmanned aircraft to lift 15,000 pounds of SAI materials to 18–20 km, two prototypes in three years for about $120 million, about $1 billion more to reach production of a fleet. Reflective, a San Francisco nonprofit, has published an SAI Research Roadmap with a 10-to-22-year cost of $370 million to $1.36 billion: retrofit aircraft for sulfur-dioxide release at 13–15 km, then high-altitude aircraft, then outdoor releases scaled from about 10 tons to about 250 tons a day. R&D and the fleet are one in the same SAI program.

- **Private operators are already releasing material in outdoor experiments, with no rules, laws, or regulations.** Skyward Wildfire Technologies filed NOAA reports for summer 2026 lightning-suppression trials over Idaho, Montana, Oregon, Alaska and Washington, to insert aluminum-coated chaff similar to military chaff into convective storm clouds (aluminum SDS: flammable dust, respiratory and eye irritant, toxic to aquatic life), and marked the applications with no environmental impact statement. Rainmaker Technology flew silver-iodide flare seeding over Alaska's Kenai Peninsula in August 2026, published its own estimate of 19 million gallons of added rain in three hours, and drew objections from local residents and legislators, that no state official had approved it. Silver iodide is toxic to aquatic life. Their flares use a combustion solution of propane, acetone, and paradichlorobenzene, a pesticide banned in the EU. In September 2026 Rainmaker raised a $100 million Series B. On October 8, 2026, it signed with Jordan's Jordan Valley Authority as its first international partner, U.S. Ambassador present, placing private U.S. weather modification inside the Middle East. It lobbied during Florida's prohibition debate and is seeking a further FAA exemption to carry more pyrotechnic flares on drones, against the rule that a small unmanned aircraft under 55 pounds may not carry hazardous material. Make Sunsets has launched weather balloons carrying sulfur dioxide, a criteria pollutant listed under the Clean Air Act since 1971, and has sold the flights as cooling credits. Mexico barred the launches after unauthorized flights in Baja California. In Reno, Nevada, the founders mixed sulfur dioxide from fungicide in a hotel room and released balloons from a parking lot and a park while families with children were present. Early balloons carried grams. The company later reported payloads above a kilogram and more than 124 deployments, and said it intends to scale up. In April 2025 EPA's Office of Air and Radiation issued a Clean Air Act Section 114 demand for information. Sulfur dioxide is highly toxic and when in contact with moisture becomes sulfuric acid, then acid rain.

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- **Space-based systems and deployment are no longer a concept only.** On July 9, 2026 the FCC licensed Reflect Orbital's test satellite Eärendil-1, an 18-meter mirror meant to shine a moving spot about three miles wide for a few minutes. The company, backed by about $26.5 million from Lux Capital and Sequoia, also holds an Air Force Research Laboratory contract of about $1.25 million (FA864925P0312) to study on-demand reflected sunlight for military operations. A mirror that can bounce sunlight onto a chosen spot can be aimed to bounce it away. NASA's July 2026 NIAC award for DimSun prices a dust cloud at the Sun–Earth L1 point, cutting incoming sunlight 1.16 percent, at roughly $134 billion on the proposer's own estimate. Space Based Sunshade (SBS) proposes a $1-$10 trillion plan to place thousands of reflective space mirrors/shades or controlled dust clouds near the Sun-Earth L-1 point covering an estimated 1.16 million sq miles to reflect 1% of sunlight away from Earth to lower temperatures by 1.8°F. A prohibition that says "injection" and stops there does not cover this, legislative language should cover all new technology methods.

- **Six funders account for $275.7 million, and startup investors now outrank the U.S. government.** Rainmaker Technologies second round of Series B funding raised $100 Million. Stardust's investors, $80 million. The United Kingdom, $64.2 million, including outdoor-experiment plans through ARIA's £56.8 million Exploring Climate Cooling program. Quadrature Climate Foundation, $50 million. The Simons Foundation, $50 million. The U.S. government, $26.5 million. Known solar-radiation-modification funding reached $267 million through 2025, eleven times the 2011–2015 total. SilverLining, backed by the Pritzker Innovation Fund, has a multi-year governance plan for SAI, SRM, and MCB. The public did not vote on any of it.

- **Three states have already replaced permission with a prohibition. The bills behind them are not isolated.** In the 2025 sessions, and in the 2026 sessions to date, more than 100 prohibition or restriction bills were introduced in the states and in Congress, counting House and Senate companions as separate bills. In the U.S. House, two prohibition bills are pending in the 119th Congress and have not reached the floor: H.R. 4403, the Clear Skies Act, introduced July 15, 2025, and H.R. 7452, the Air Quality Act, introduced February 9, 2026. A third House bill, H.R. 6941, is a study only. Tennessee SB 2691 / HB 2063 (2024) was the first enacted ban. Florida SB 56, Chapter 2025-157, is a third-degree felony, with fines up to $100,000, airport reporting to the Department of Transportation, and repeal of the state's research and licensing authority. Louisiana SB 46, Act 95 (2025), and SB 189, Act 601 (2026), state that the ban includes release by the burning of fuel in an aircraft engine. Model bills now circulating would do the opposite and license stratospheric releases. Section 214 of S. 3923 directs NOAA to report on tropospheric and stratospheric observation gaps and on how changes in atmospheric composition affect Earth's radiation budget, and authorizes pilot instruments on commercial aircraft and agreements with private and foreign platforms. The Weather Modification Reporting Act of 1972 still requires only a notice. No treaty gives this state a veto. The National Academies' Reflecting Sunlight (2021) records the open risks: shifted rainfall, ozone effects, and termination shock.

What the prohibition should do

- Prohibit the intentional or unintentional injection, release, dispersion, ionization, reflection, Super or Artificial Intelligence or other altering of the atmosphere, clouds or of incoming sunlight for the purpose or effect of affecting temperature, weather, climate, precipitation, snow, or Earth's radiative balance. The means include aircraft, drones, ground generators, marine sprays, balloons, and space-based or satellite-based systems. It is not only implemented by stratospheric aerosol injection.

- Name SAI, SRM, MCB, SBS, marine and terrestrial cloud modification, ionization, and chemically or electrically induced precipitation or snow, and cover any later version of the same act. Include research and development, outdoor experiments, NOAA applications for geoengineering or weather modification, transit, and basing of equipped aircraft. No outdoor-release research exemption.

- Cover conduct in, from or over, this state. Repeal any license that treats weather modification as authorized. Set fines and imprisonment on at minimum the Florida model, up to five years minimum and $100,000 or more per offense, to include operators, flight captains, entities, and management. Assign enforcement to a named agency and a standing task force, with authority to use the National Guard or other law enforcement in support of civil authorities when an equipped aircraft or a release is underway.

We are asking you to close the gap and protect your citizens and State, before a stratospheric or weather altering program for profit business or initiative, funded abroad and by private capital, treats this state's sky as downwind experimental territory. [I or We] would welcome a briefing or meeting and can provide the information behind each point above.

Respectfully,

[Name] ·

[Title, Organization] ·
[City, State] ·
[Email]
[Phone]

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Private Companies

• **Iris Aero** — 2026; (IR-1 announcement); UChicago grant. IR-1 design. ~$120M for two prototypes, ~$1B to production.
• **Heka Cloud** — 2025; $25M self-funded. Somers, New York. AI ionization rain service. UAE pilot.
• **Skyward Wildfire** — 2024; CAD $7.9M, Vancouver, Canada. Lightning-suppression aluminum chaff.
• **Rainmaker** — 2023; $100M Series B. El Segundo, California. Drone silver iodide cloud seeding.
• **RAIN (Nasdaq: RAIN)** — 2024;~$45M deal. Naples, Florida. Ground ionization for rain and snow.
• **Meteoric** — 2025; $500K. San Francisco, California. Drones to clear clouds and storms.
• **Reflective** — 2026; $20M-. San Francisco. SAI roadmap $370M–$1.36B over 10–22 years.
• **Reflect Orbital** — 2021; $20M Series A. Hawthorne, California. Orbital mirrors. Plus $1.25M Air Force contract.
• **Make Sunsets** — 2022; Est. $1.82M. United States. SO_2 weather balloons. Clean Air Act inquiry.
• **Stardust Solutions** —2024, $75M. U.S.–Israel and Delaware, USA. Stratospheric reflective particles.
• **Seeding Operations and Aerosol Research (SOAR)**— Est. $1–5M. Wichita Falls, Texas. Cloud seeding and aerosol R&D.

Philanthropy

in
• **SilverLining** — ~$30M for SAI research. United States. Backed by Pritzker Innovation Fund. Policy on SAI, SRM, MCB.
• **Simons Foundation** — 1994; ~$50M spent and committed on solar-geoengineering research. United States.
• **Quadrature Climate Foundation** — 2019; ~$50M spent and committed on solar-geoengineering research. United Kingdom.
• **Planetary Sunshade Foundation (Institute)** —2021, $262K in revenue, $500K Grant from ARIA, UK, space based SRM, Los Angeles, CA

Government Programs

• **NASA – DimSun Dust Cloud** — July 2026 (NIAC selection); NASA NIAC grant, up to $175,000 (July 2026). United States. Space dust-cloud sun dimming concept. ~$134B full-system estimate.
• **ARIA** — September 2024 (programme funding call); £56.8M. United Kingdom. Climate-cooling research, outdoor tests.

SOURCES

ARIA — Exploring Climate Cooling: https://aria.org.uk/opportunity-spaces/resilient-climate-and-ecosystems/exploring-climate-cooling
Iris Aero — IR-1 aircraft: https://srm360.org/news-article/planes-for-sai-closer-cheaper-than-thought/
Iris Aero — Website: https://www.iris.aero/
Make Sunsets — EPA: https://www.epa.gov/newsreleases/epa-demands-answers-unregulated-geoengineering-start-launching-sulfur-dioxide-air
Make Sunsets — EPA information request: https://www.epa.gov/so2-pollution/epa-seeks-information-make-sunsets
Make Sunsets — Hotel-room SO2 preparation: https://time.com/6257102/geoengineering-make-sunsets-us-balloon-launch-exclusive/
Meteoric — Website: https://meteoric.earth/
Meteoric — Y Combinator company profile: https://www.ycombinator.com/companies/meteoric
NASA — DimSun 2026 technology awards: https://www.nasa.gov/news-release/nasa-awards-2026-innovative-technology-concepts/
NASA — DimSun Dust Cloud study: https://www.nasa.gov/directorates/stmd/niac/niac-studies/dimming-the-sun-dimsun-using-controllable-dust-cloud-to-reduce-solar-insolation/
National Academies — Reflecting Sunlight: https://nap.nationalacademies.org/catalog/25762/reflecting-sunlight-recommendations-for-solar-geoengineering-research-and-research-governance
Planetary Sunshade Institute — SBS: https://planetarysunshade.org/
Planetary Sunshade Institute — Space Reflector Baseline Survey: https://planetarysunshade.org/publications/download-the-2026-space-reflector-baseline-survey/
Quadrature Climate Foundation — Website: https://www.qc.foundation/
RAIN — Rain Enhancement Technologies website: https://rainwatertech.com/

Rainmaker — $100 million Series B: https://www.rainmaker.com/blog/announcing-rainmaker-s-usd100m-series-b
Rainmaker — Agreement with Jordan: https://alanbatnews.net/eng/article/484437

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Rainmaker — Alaska seeding results: https://www.rainmaker.com/blog/rainmaker-alaska-results

Rainmaker — Utah operations plan, p. 7: https://idwr.idaho.gov/wp-content/uploads/sites/2/Cloud-Seeding-Committee-Meeting-No.-2-25MATERIALS.pdf

Rainmaker — Website: https://www.rainmaker.com/

Reflect Orbital — FCC July 9, 2026 authorization announcement (DA 26-706): https://www.publicnow.com/view/803659C4687C652BA25B550ED9505AD9B1255667

Reflect Orbital — Air Force/AFWERX SBIR Phase II contract announcement: https://www.prnewswire.com/news-releases/reflect-orbital-selected-for-sbir-phase-ii-contract-by-afwerx-to-advance-satellite-based-sunlight-redirection-technology-302471870.html

Reflect Orbital — AFRL contract FA864925P0312 award record: https://www.highergov.com/contract/FA864925P0312/

Reflect Orbital — Website: https://www.reflectorbital.com/

Reflective — SAI research roadmap: https://roadmap.reflective.org

SilverLining — Website and research: https://www.silverlining.ngo/

Simons Foundation — Solar Radiation Management research: https://www.simonsfoundation.org/solar-radiation-management/

Skyward Wildfire — NOAA report archive (Idaho, Montana, North Carlina, Oregon, Washington, Alaska): https://library.oarcloud.noaa.gov/noaa_documents.lib/OAR/OWAQ/Weather_Modification_Project/FY26/Q4/2026NCSKYW-M.pdf

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Skyward Wildfire — Website: https://www.skywardwildfire.com/

SOAR — NOAA 2023 final weather modification report: https://library.oarcloud.noaa.gov/noaa_documents.lib/OAR/OWAQ/Weather_Modification_Project/FY24/Q2/2024TXSA-F.pdf

SOAR — Website: http://s964098368.websitehome.co.uk/index.asp

SRM360 — Geoengineering funding tracker: https://srm360.org/article/who-funds-work-on-solar-geoengineering-2026/

Stardust Solutions — Aerosol aircraft patent: https://patents.google.com/patent/WO2026139957A2

Stardust Solutions — Composite sub-micron solid particles abstract: https://arxiv.org/abs/2606.15955

Stardust Solutions — Website: https://stardustsrt.com/

Weather Modification Reporting Act — Federal statute: https://www.law.cornell.edu/uscode/text/15/330

Legislation:

Florida — SB 56: https://www.flsenate.gov/Session/Bill/2025/56

Tennessee — SB 2691: https://wapp.capitol.tn.gov/apps/BillInfo/Default.aspx?BillNumber=SB2691&GA=113

Louisiana — SB 46: https://www.legis.la.gov/legis/BillInfo.aspx?s=25RS&b=SB46&sbi=y

Louisiana — SB 189, ACT 601: https://www.legis.la.gov/legis/BillInfo.aspx?s=26RS&b=SB189&sbi=y

Congress — H.R. 4403: https://www.congress.gov/bill/119th-congress/house-bill/4403

Congress — H.R. 7452: https://www.congress.gov/bill/119th-congress/house-bill/7452

Congress — S. 3923: https://www.congress.gov/bill/119th-congress/senate-bill/3923

Safety Data Sheets / Chemical Safety References

Silver iodide: https://pubchem.ncbi.nlm.nih.gov/#query=silver%20iodide

Aluminum: https://pubchem.ncbi.nlm.nih.gov/#query=aluminum

Acetone: https://pubchem.ncbi.nlm.nih.gov/#query=acetone

Propane: https://pubchem.ncbi.nlm.nih.gov/#query=propane

Paradichlorobenzene: https://pubchem.ncbi.nlm.nih.gov/#query=1%2C4-dichlorobenzene

Sulfur dioxide: https://pubchem.ncbi.nlm.nih.gov/#query=sulfur%20dioxide

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