

SOaRS 2024



Richard Gustafson
CEO & President

March 2024



PowerLight designs and develops long distance wireless power beaming solutions.

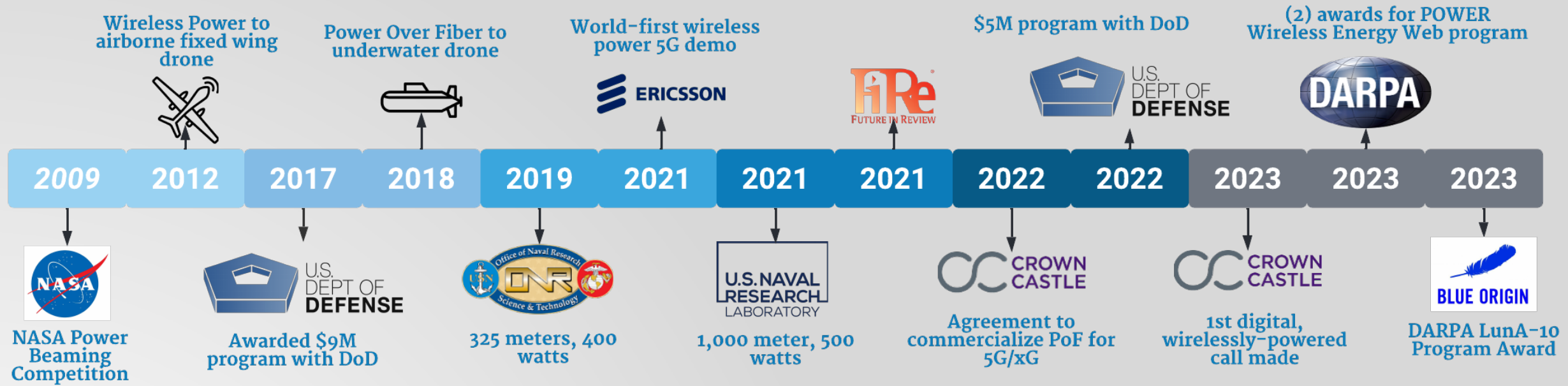
We've successfully concluded a 7 year \$20M DOD technology demonstration and validation program.

PowerLight now executing on 3 new DOD power beaming programs.

We are seeking development partners for aerial power beaming



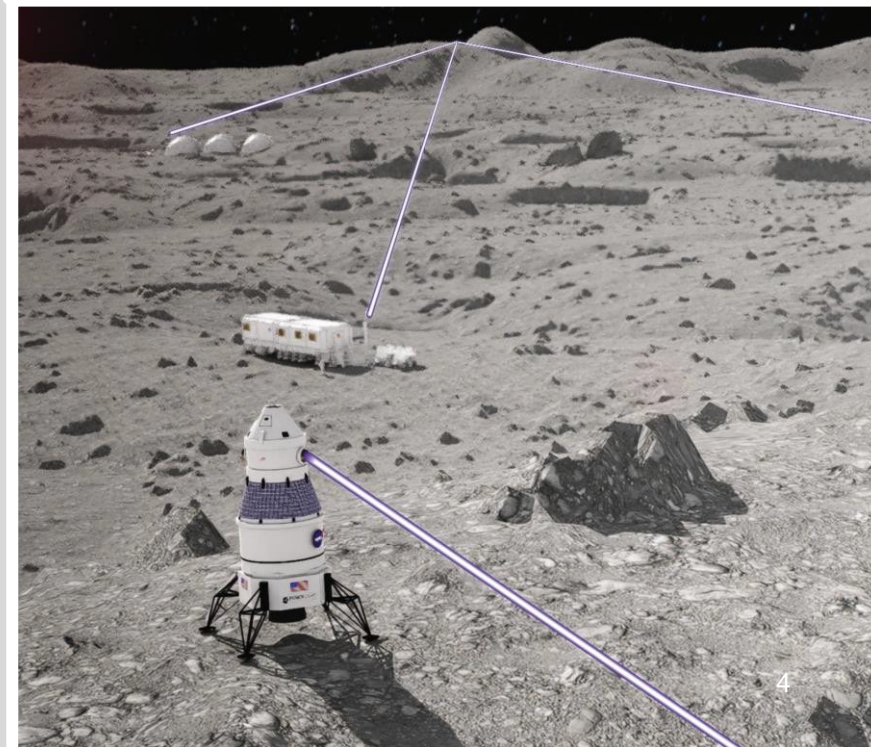
A decade of world's-firsts in laser power beaming



Laser power beaming redefines the possibilities of distributing energy.

Laser Power Beaming enables:

- Flexibility to place assets where they are needed, regardless of nearest grid-access
- Mobile, on-demand recharging undersea, in the air, on the moon, and in space
- Addressing limits such as emissions, weight, distance, and battery life, as well as resupply and recharge cost & danger

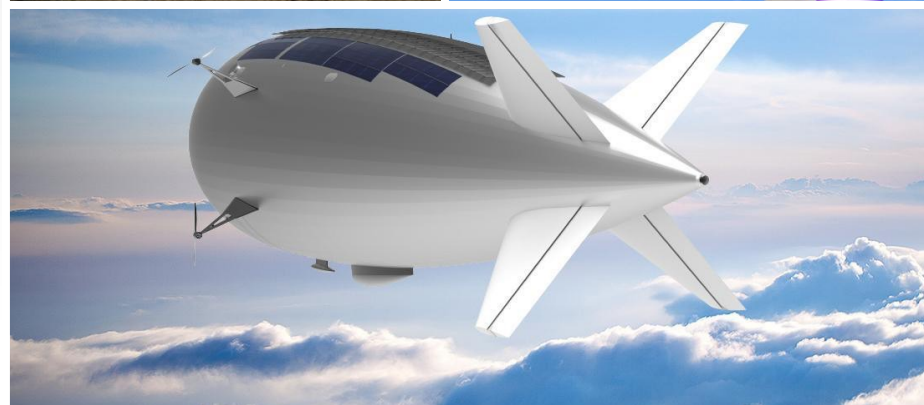


Defense Operational Energy, a new mission frontier

- Dynamic energy needs: DOD needs energy speed, flexibility, and resiliency, for sustaining operations across greater distances on land, air, sea.
- Energy logistics burden in future contested operating environments: Traditional resupply will be challenged in areas such as the Middle East and Indo-Pacific.

“We desire to employ energy on the battlefield in new and disruptive ways. Wireless power beaming is a capability we want to see exploited to our advantage and represents a fundamental breaking of the chain of fossil fuel dependency.”

**Feb. 2024: General Michael “Erik” Kurilla,
Commander, U.S. Central Command**



Electrifying the aerial stack with power beaming

- Extend operational endurance
- Support overnight operations
- Enable persistent ISR & comms
- Allow more power-hungry edge compute, EW and AI payloads

“Laser power beaming to the stratospheric domain and very Low Earth Orbit (vLEO) platforms are areas in which we seek your support as we pursue disruptive technological advancements in these emerging technologies.”

Feb. 2024: General Michael “Erik” Kurilla, Commander, U.S. Central Command

Wireless power beaming to HAPS

Capture first mover advantage and operationalize the stratosphere to provide expeditionary wireless energy to persistent, long endurance C5ISR assets.

Complicate the adversary's ability to deny, degrade, or disrupt our space capabilities



Enable launching HAPS "on demand" day/night to enhance operational deployment, employment, and stealth

Enhance "IP in the Sky" – comms over denied and contested logistics areas of operation

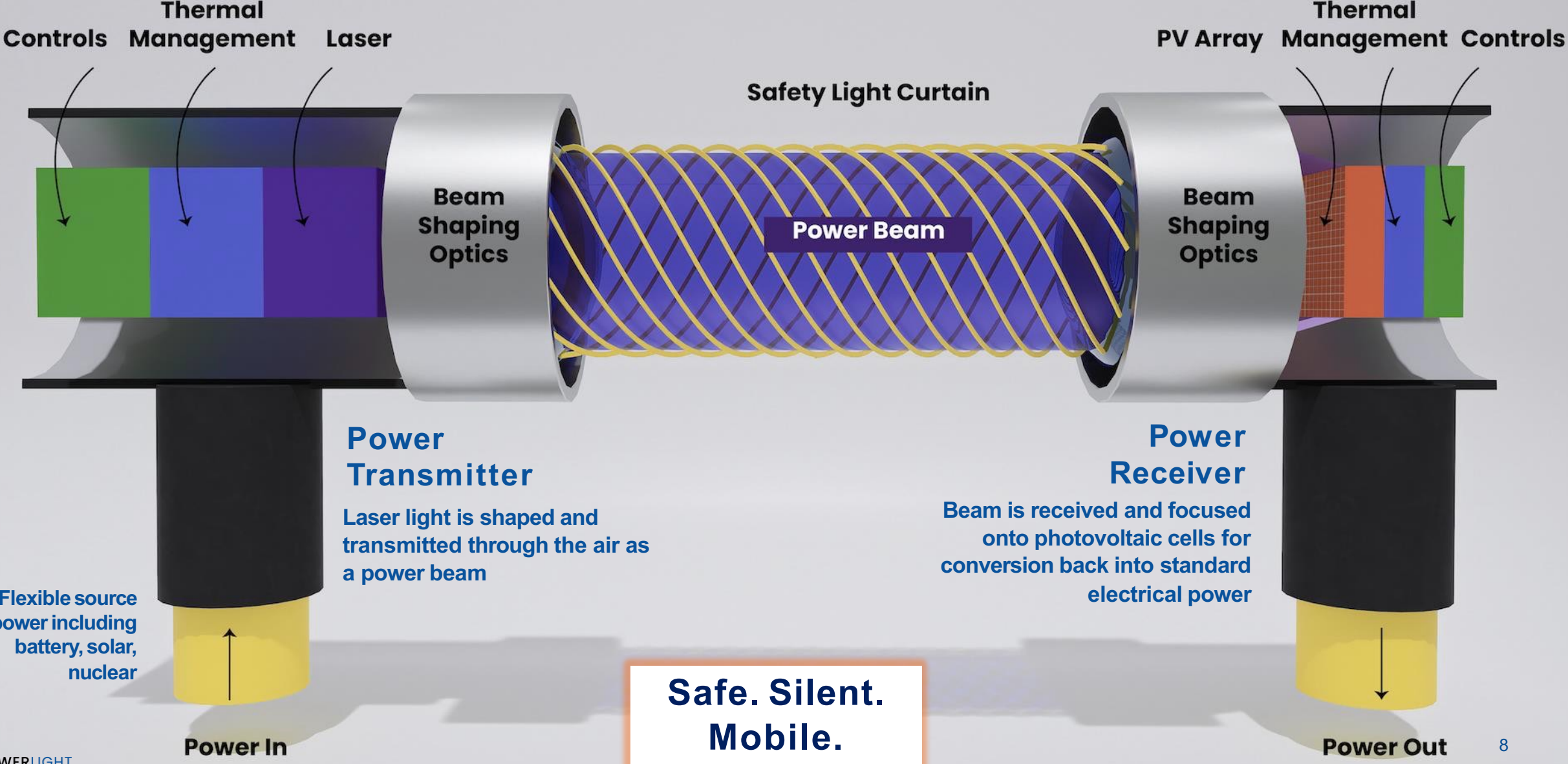
Cross-domain redundancy and rapid reconstitution of critical communications and ISR

Decrease footprint and supporting infrastructure for existing C5ISR operations



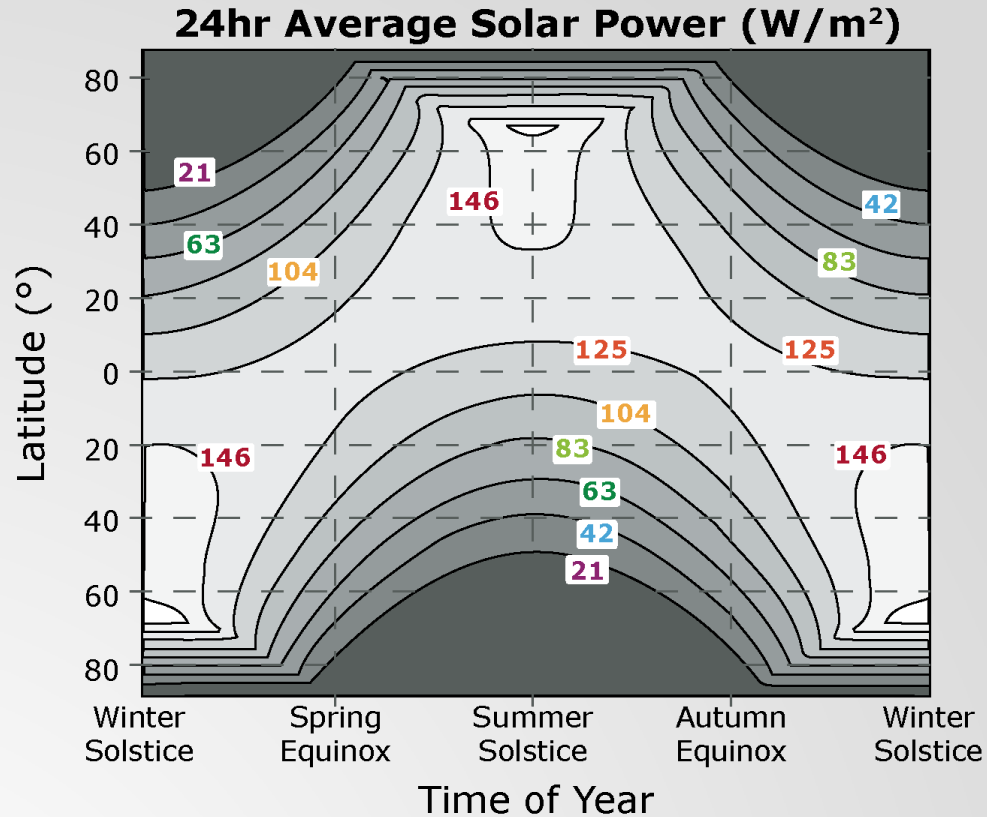
100,000ft.
40,000ft.

How It Works – Power Beaming



Powering persistent flight

Laser Power Beaming provides “on demand power at altitude” for persistent station keeping.



Average solar power over 24hrs:
20-150 W/m²
Depends on place & time



Average power from laser power beaming:
1,000-10,000 W/m²
Any place, any time

**Up to 500x more
power per area!**

PowerLight Technologies

Seek development partners for in-flight aerial recharging for the Defense & Commercial Aerospace drone markets

- Power beaming to 3,000 to 100,000 ft.
- Target 250 to 1,000 watts delivered
- End-to-end safety system by PowerLight
- Portable transmitter with targeting / tracking
- System specs tailored by early partners
- Supported by DOD
- Participation opportunities vary



Located in Kent, WA

New HAPS Alliance Member

Dual-use, defense & commercial solutions

Academic research and intern programs

Thank You.

www.powerlighttech.com