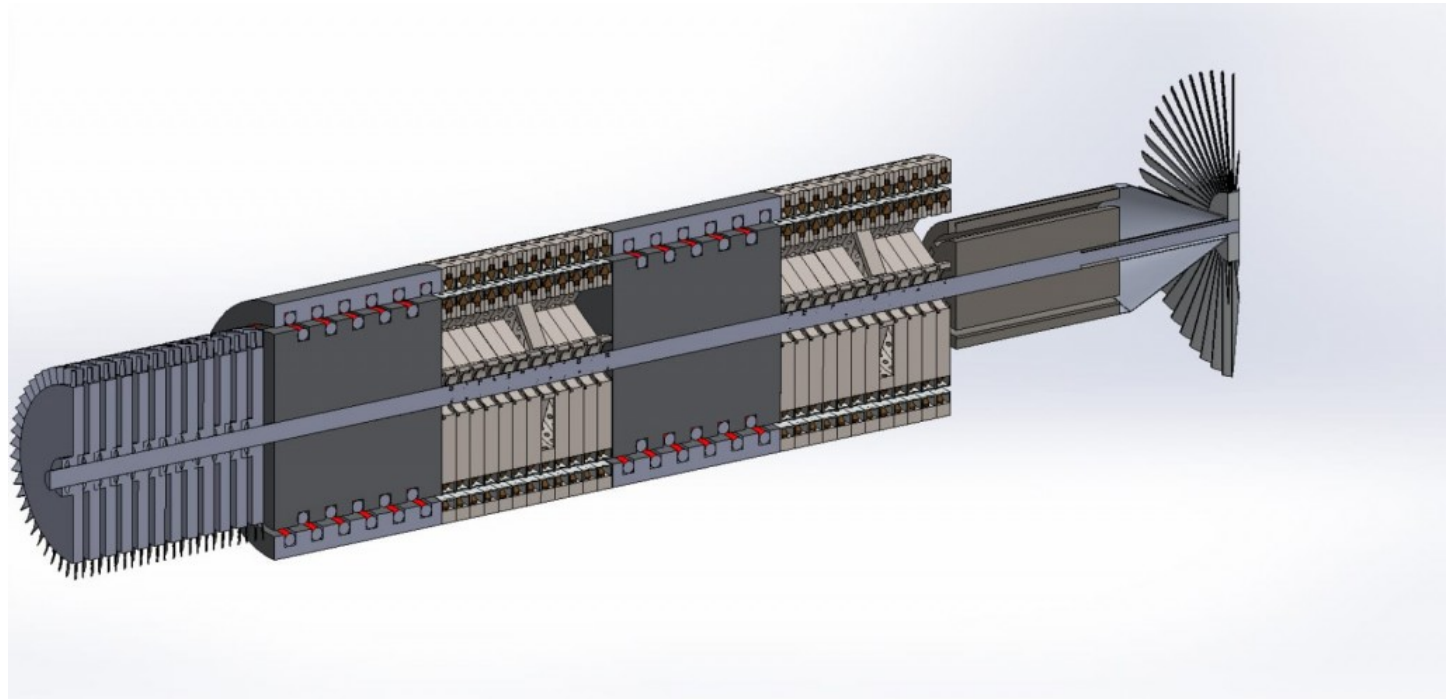


Turkish Inventor Unveils Electric Aircraft Engine Concept That Uses Atmospheric Air as Direct Fuel

Published national patent application now under substantive examination describes a high-energy air vehicle engine concept capable of generating high-altitude thrust without onboard fuel.



Sydney, New South Wales Oct 17, 2025 ([Issuewire.com](https://www.issuewire.com)) - Turkish inventor **Serkan Alsac** announces the publication of a national patent application that has been **accepted for substantive examination** and listed in the official patent bulletin. The invention describes an **electric aircraft engine that uses atmospheric air as the direct fuel** to produce thrust—known in Turkish as “**Hava gazlarını yakan elektrikli hava aracı motoru.**”

The application (**Application No. 2023/002681**) was filed on **March 10, 2023** and published on **June 21, 2023** in the **2023_06 Official Patent Bulletin**. A public entry is available on Google Patents (TR2023002681A2). Collectively, these identifiers establish the public record for a concept that seeks to replace large onboard fuel loads with **precisely delivered electrical energy** inside the engine.

Purpose and significance

The core objective is explicit: **use the air itself as fuel**. By eliminating the need to carry tons of conventional fuel, aircraft could reduce weight, logistics, and associated emissions. The concept frames a cleaner propulsion pathway in which electrical input powers high-energy processes within the engine while the atmosphere provides the working medium for **energy conversion and momentum transfer**—with a particular focus on **high-altitude** operation.

Technical operating principle (concept-level)

- **Ionization:** Incoming air passes through a high-energy region where it is ionized; electron-ion

populations are established under controlled conditions.

- **Expansion:** The ionized flow gains **kinetic energy**, expands, and enters reactive states that begin to generate directed momentum.
- **Energy Loading:** The expanding air receives additional energy input to sustain reactions and increase flow acceleration.
- **Combustion/Release Chamber:** Rapid **energy release** occurs (explosive-like pressure/temperature rise within design limits), further increasing flow speed and pressure.
- **Turbofan Conversion:** The energized flow is converted into **maximum thrust** across turbofan stages.
- **Single-line, single-shaft architecture:** The engine operates along a single flow path and **single shaft**; as rear turbofan stages spin, the forward propeller accelerates, pulling in more air and **building thrust in stages** toward **high-altitude performance**.

“We investigate atmospheric gases under high-energy conditions to convert part of that energy into **useful thrust—without carrying fuel**. In parallel, we are developing an **advanced iteration** aimed at operation **both within the atmosphere and beyond it**, toward a **fuel-independent ‘space-engine’** concept.” — **Serkan Alsac**

Public identifiers

- **Application No.:** 2023/002681
- **Filing Date:** March 10, 2023
- **Publication Date:** June 21, 2023 — **Official Patent Bulletin 2023_06**
- **Public record (Google Patents):** <https://patents.google.com/patent/TR2023002681A2/tr>

Next steps

Following its **June 21, 2023** publication in **Official Patent Bulletin 2023_06**, the application remains under **substantive examination**. Any further updates—such as office actions, amendments, or a grant decision—will be formally recorded and, where applicable, appear in the **Official Patent Bulletin**.

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