

**Updated Analysis on the Cost and Benefits of
Maintaining or Selling Aircraft Owned by
the South Carolina Aeronautics Commission**

Prepared by:

The South Carolina Department of Administration's
Executive Budget Office

In consultation with the South Carolina Aeronautics Commission

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I. Introduction

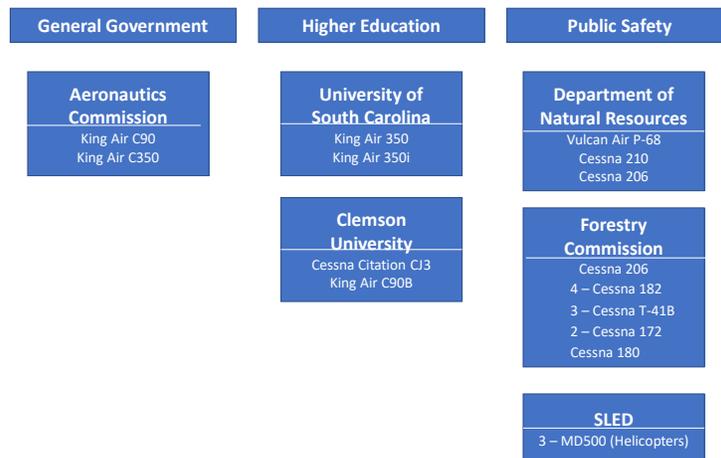
In a March 5, 2021, letter, Governor McMaster directed the South Carolina Department of Administration (Admin), in consultation with the Aeronautics Commission, to “conduct an up-to-date analysis on the cost and benefits of maintaining or selling aircraft owned by state agencies and institutions of higher education.” The Budget and Control Board, the predecessor agency to Admin, completed the last aeronautics study in January 2014 as directed by proviso 117.130 of the FY2013-14 Appropriations Act. The core of the 2014 analysis was a comparison of the cost effectiveness of aircraft operated by the Aeronautics Commission and charter services. The 2021 study updates the same methodologies, for fiscal years 2018, 2019 and 2020.

The 2014 study also addressed FY2013-14 proviso 117.120 which prohibited institutions of higher learning from using state aircraft for athletic recruiting. This is no longer prohibited, as FY2021-22 proviso 117.97 states, “Institutions of higher learning may use the state aircraft operated by the Division of Aeronautics for the purpose of athletic recruiting, provided that they reimburse the Division of Aeronautics for all flight hours on an at cost basis, using non-general funds. To ensure availability of the aircraft for purposes of economic development, the Department of Commerce shall have first right of refusal in the event of scheduling conflicts with athletic recruiting flights.”

Therefore, the current study is an analysis of total flight hours regardless of purpose. However, one important item to consider when reviewing the data is the pandemic’s impact on the flight hours for FY2020. Whereas the 2014 study analyzed two fiscal years of data, this study utilized three years of data to account for this.

II. State Aircraft Ownership

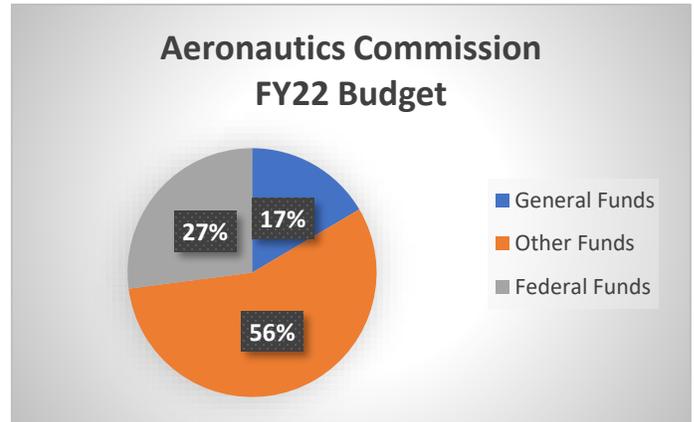
Several state agencies and institutions own and operate aircraft; however, as in the 2014 report, this report focuses on the Aeronautics Commission.



III. Aeronautics Commission Overview

At the time of the 2014 study, the Aeronautics Commission was a component of the Budget and Control Board but is now a stand-alone state agency overseen by eight commissioners.

In the FY22 Appropriations Act, the agency had a total budget of \$12,852,177 consisting of \$2,123,250 in General Funds, \$7,250,000 in Other Funds, and \$3,478,867 in Federal Funds. The agency is authorized to have 14 FTEs including 9.80 from General Funds.



The agency derives its revenues from General Fund appropriations, passenger revenue, maintenance revenue, fuel revenue, hanger rental and the State Aviation Fund (airport development).

The agency operates two divisions: Airport Development and Flight Department.

IV. Aeronautics Flight Department

The Flight Department of the Aeronautics Commission operates and maintains two aircraft for the conducting of official business by the Governor, constitutional Officers, General Assembly, state agencies and political subdivisions. The two aircraft are a 1983 King Air C90 and 1990 King Air 350. Both are twin-engine, turbine powered propeller jets (turboprops).

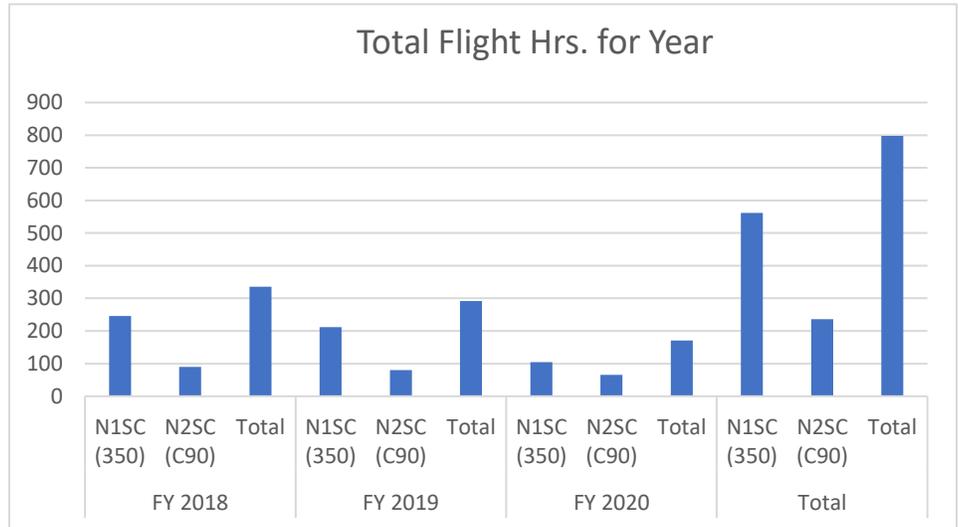


The King Air C90 is a small, six-passenger aircraft and the King Air 350 is a medium size aircraft with seating for up to nine passengers. Carrying four passengers, the aircraft have a range of approximately 966 and 1,656 statute miles, respectively (statute miles measure the distance between two points in a straight line, regardless of the curvature of the Earth, with 5,280 feet equal to one statute mile). The King Air 350 requires two pilots for all flights with passengers. The King Air C90 requires only one, but is

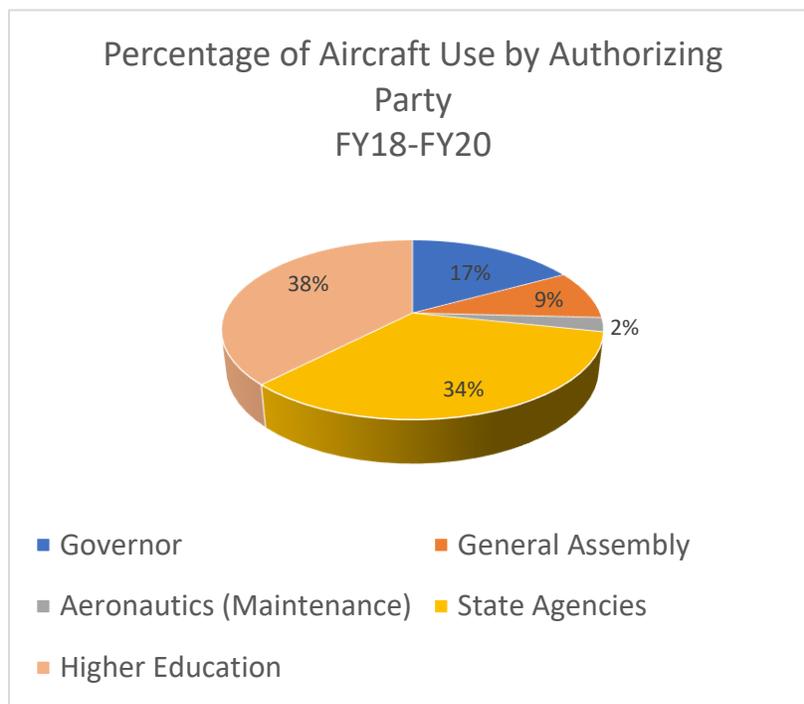
flown with two upon request and, as a matter of practice, when transporting the Governor. Members of the General Assembly, Governor, and constitutional officers do not pay for usage, whereas all others are billed \$1,500 per hour for the King Air 350 (N1SC) and \$1,000 per hour for the King Air C90 (N2SC).

V. Aircraft Usage

Usage of the aircraft is on a first-come, first-served basis and is usually reserved several days in advance. Total flight hours declined over the years FY2018 to FY2020, though the pandemic impacted aircraft usage in the last quarter of FY2020.



During FY2018 to FY2020, usage of the state aircraft was as follows:



VI. Cost of Flight Operations (Fixed and Variable)

The 2014 study examined the variable and fixed costs of the Aeronautics Commission’s flight operations to estimate the total cost per flight hour. Variable costs include aviation fuel, engine reserves, maintenance supplies and services, travel expenses and airport fees. Fixed costs include salaries and fringe, contractual services, supplies, fixed charges, travel and training, utilities and net facility costs. Updating the 2014 methodology shows that the total costs per flight hour for the King Air 350 has decreased from \$3,140 to \$2,745 (-12.5%) while the King Air C90 decreased from \$2,515 to \$2,452 (-2.5%).

	2014 Study		2021 Study	
	King Air 350	King Air C90	King Air 350	King Air C90
Estimated Variable Costs/Flight Hour:				
Aviation Fuel	\$504	\$300	\$368	\$219
Engine Reserves	\$234	\$154	\$299	\$154
Maintenance Supplies and Services	\$643	\$302	\$332	\$333
Contract Pilots	-	-	\$74	\$74
Travel Expenses	\$27	\$27	\$39	\$39
Airport Fees	\$21	\$21	\$64	\$64
Total Variable Cost / Flight Hour	\$1,429	\$804	\$1,175	\$882
Estimated Fixed Costs/Flight Hour:	\$1,711	\$1,711	\$1,570	\$1,570
Total Cost / Flight Hour	\$3,140	\$2,515	\$2,745	\$2,452

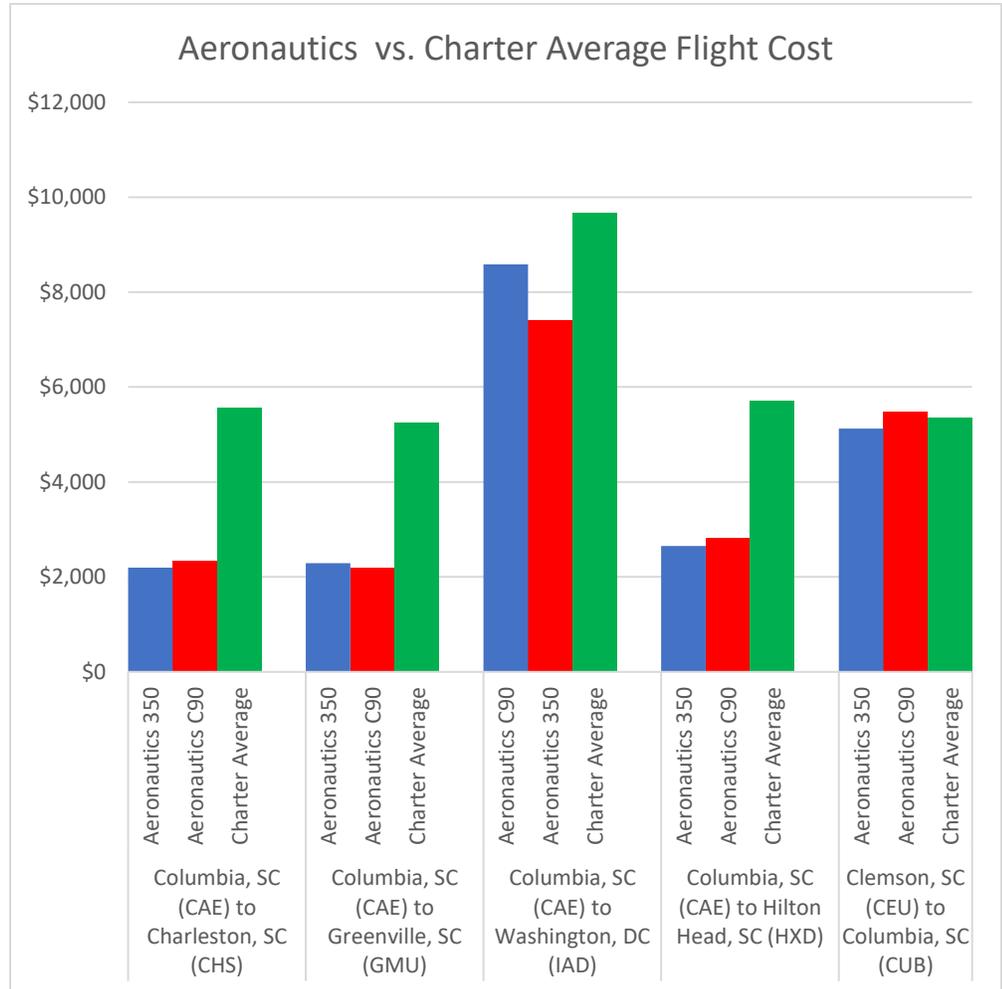
In the 2014 study, the total fixed costs were based on the two-year average of 206 flight hours, whereas the average flight hours of the current study’s three years were 266. It is important to note that an increase in flight hours affects fixed costs by further distributing the costs per hour.

VII. Charter Comparison

The 2014 study used the total costs per flight hour to compare the Aeronautics Commission costs to charter service rates. Following the same methodology, this study examined estimates from five charter services for the following common routes:

- Columbia, SC (CAE) to Charleston, SC (CHS)
- Columbia, SC (CAE) to Greenville, SC (GMU)
- Columbia, SC (CAE) to Washington, DC (IAD)
- Columbia, SC (CAE) to Hilton Head, SC (HXD)
- Clemson, SC (CEU) to Columbia, SC (CUB)

This chart shows the comparison of the two Aeronautics Commission aircraft to the average charter cost. The Aeronautics Commission's flight costs were less for trips originating from Columbia. Costs were higher for Clemson to Columbia because the Aeronautics Commission's aircraft are based in Columbia, thus requiring the aircraft to first travel an empty leg (without passengers) from Columbia to Clemson. Overall, based on the data in this analysis, Aeronautics can provide service below the average market rate for charter services to the selected destinations.



VIII. Alternatives and Issues

It is worth noting that the following alternatives and issues identified in the 2014 study are still relevant.

- Charter quotes are point in time and subject to change
 - The charter quotes are subject to changes in market rates and availability.
- Aviation fuel management
 - The Aeronautics Commission owns and manages an aviation fuel tank farm which helps the agency save money on fuel for its aircraft as well as aircraft operated by other state agencies.
- Parts and maintenance
 - The agency employs two aircraft mechanics which help manage maintenance costs and avoid mark-up on parts for its aircraft as well as other state agencies' aircraft.
- One-time Revenue from Sale of Aircraft
 - The Aeronautics Commission reports that the approximate resale value of its two aircraft is \$1.4m for the King Air 350 and \$600k for the King Air C90.

- The Commission has proposed selling the current fleet in order to update to newer aircraft that would serve the state for years to come. However, to not miss serving current customers, the division would need an appropriation to make a purchase prior to selling what is currently owned.
- Safety
 - As stated in the 2014 study, the Aeronautics Commission has a stellar safety record that has continued since that time.
 - Having a known flight crew adds to the value of safety in aircraft operations. In charter use, the state would lose crew oversight.
- Aircraft Availability
 - Having two aircraft has enabled the Aeronautics Commission to be able to provide services when requested. Charter providers could also be subject to availability issues depending on market demand.
- Resource Available for Emergency Response
 - The Aeronautics Commission participates in the state's emergency response plan.
- Accountability
 - Flight logs and manifests are posted on the Aeronautics Commission website which serves as a central point of transparency.
- Economic Development
 - The state aircraft play an important role in economic development by having cost efficient and readily available service.

IX. Concluding Comments

By updating the data in the methodologies of the 2014 study, we were able to reexamine the key points of the prior report. The Aeronautics Commission has experienced a 12.5% reduction in total cost per hour for the King Air 350 and a 2.5% reduction for the King Air C90. When comparing these total costs per hour to the average of five charter services for common routes, the Aeronautics Commission's costs were below market rates for flights that originate from Columbia, where the aircraft are based.

As stated in the report, selling the aircraft would yield one-time revenue, but higher costs may be expected from charter services and availability could potentially present challenges. Also, other state agencies with aircraft who rely on the Aeronautics Commission for maintenance, fuel and hangar rental would have to identify other alternatives.