



*ETHIOPIAN AIRLINES IMPLEMENTED
UPR TRIAL FLIGHT EXPERIENCE SHARE*

- Five UPR Trial Phases implemented by Ethiopian Airlines since 02NOV'2023 by coordinating with FRA Project Team members. The first phase was on 02-NOV'2023 (one way & single) , the second phase in FEB'2024 (one way & multiple), the third phase in MAR'2024 (one way & multiple), the fourth phase in APR'2024 (both way & multiple) and finally the fifth trial phase was in JUL/AUG2024 executed successfully.

UPR Trial Flight implemented in NOV'23 (Phase I)

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B777L	ET935/ADD-ABJ/02NOV'23	Conventional RTE	05:31	36,200	63,014	2,615
		UPR RTE	05:25	35,400	61,595	2,569
		Benefit Gained	00:06	800	1,419	46

UPR Trial Flights implemented in FEB'24 (Phase II)

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B788	ET935/ADD-ABJ/01FEB'24	Conventional RTE	05:52	29,017	55,029	2,617
		UPR RTE	05:43	28,284	53,622	2,569
		Benefit Gained	00:09	733	1,407	48

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B788	ET847/ADD-CPT/01FEB'24	Conventional RTE	06:11	31,665	54,605	2,900
		UPR RTE	06:05	30,987	53,519	2,833
		Benefit Gained	00:06	678	1,086	67

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A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
A350	ET935/ADD-ABJ/06FEB'24	Conventional RTE	05:43	34,382	57,729	2,627
		User Preferred Route (UPR) RTE	05:35	33,800	56,884	2,569
		Benefits recorded	00:08	582	845	58

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B787/ET-AOT	ET935/ADD-ABJ/08FEB'24	Conventional RTE	05:46	28,091	50,060	2,627
		User Preferred Route (UPR) RTE	05:40	27,583	48,767	2,569
		Benefits recorded	00:06	508	1293	58

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
A350/ET-AYN	ET935/ADD-ABJ/09FEB'24	Conventional RTE	05:44	33,984	56,280	2,627
		User Preferred Route (UPR) RTE	05:37	33,234	55,228	2,569
		Benefits recorded in planning phase for single flight	00:07	750	1052	58

UPR Trial Flights implemented MAR'24 (Phase III)

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B787-900	ET847/ADD-CPT/25MAR'24	Conventional RTE	06:00	32,982	52,495	2,916
		UPR RTE	05:54	32,424	51,426	2,858
		Benefit Will be Gained	00:06	558	1,069	58

UPR Trial Flights implemented in APR'24 (Phase IV) Out Bound

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD
B788/ET-ARF	ET512/ADD-ABJ/24APR'24	Conventional RTE	05:33	27,606	50,005
		User Preferred Route (UPR) RTE	05:27	27,043	49,155
		Benefits recorded in planning phase for single flight	00:06	563	850

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
A350/ET-AVE	ET935/ADD-ABJ/25APR'24	Conventional RTE	05:31	29,967	50,337	2,627
		User Preferred Route (UPR) RTE	05:25	29,348	49,512	2,569
		Benefits recorded	00:06	619	825	58

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B77L/ET-ANO	ET935/ADD-ABJ/26APR'24	Conventional RTE	05:36	34,591	61,925	2,627
		User Preferred Route (UPR) RTE	05:32	34,354	61,250	2,569
		Benefits recorded	00:04	237	675	58

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B788/ET-AOS	ET512/ADD-ABJ/27APR'24	Conventional RTE	05:33	27,606	50,005	2,627
		User Preferred Route (UPR) RTE	05:27	27,043	49,155	2,569
		Benefits recorded	00:06	563	850	58

In Bound

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B788/ET-ATH	ET934/ABJ-ADD/24APR'24	Conventional RTE	05:32	27,836	43,995	2,601
		User Preferred Route (UPR) RTE	05:32	27,658	43,792	2,585
		Benefits recorded	00:00	178	203	16

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
A350/ET-AVE	ET934/ABJ-ADD/26APR'24	Conventional RTE	05:29	34,214	45,822	2,603
		User Preferred Route (UPR) RTE	05:28	34,042	45,614	2,588
		Benefits recorded	00:01	172	208	15

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B788/ET-AOS	ET513/ABJ-ADD/28APR'24	Conventional RTE	05:40	26,849	40,543	2,642
		User Preferred Route (UPR) RTE	05:34	26,781	41,498	2,616
		Benefits recorded	00:06	68	-955	26

UPR Trial Flights implemented in JUL'24 (Phase V) Out Bound

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B787/ET-AOQ	ET512/ADD-ABJ/17JUL'24	Conventional RTE	05:21	25,736	49,387	2,609
		User Preferred Route (UPR) RTE	05:18	25,512	48,896	2,586
		Benefits recorded	00:03	224	491	23
A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B787/ET-AXT	ET512/ADD-ABJ/20JUL'24	Conventional RTE	05:12	26,432	51,202	2,593
		User Preferred Route (UPR) RTE	05:10	26,430	51,036	2,569
		Benefits recorded	00:02	-	166	24
A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B787/ET-ATH	ET512/ADD-ABJ/22JUL'24	Conventional RTE	05:13	25,305	54,967	2,601
		User Preferred Route (UPR) RTE	05:08	24,952	54,174	2,569
		Benefits recorded	00:05	352	793	24
A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B787/ET-ATI	ET935/ADD-ABJ/23JUL'24	Conventional RTE	05:12	24,232	48,898	2,605
		User Preferred Route (UPR) RTE	05:08	23,964	48,546	2,570
		Benefits recorded	00:04	268	352	35

In Bound

A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B787/ET-AOQ	ET513/ABJ-ADD/18JUL'24	Conventional RTE	05:51	30,748	42,665	2,640
		User Preferred Route (UPR) RTE	05:50	30,616	41,288	2,625
		Benefits recorded	00:01	132	1,377	15
A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B77L/ET-ANO	ET934/ABJ-ADD/20JUL'24	Conventional RTE	05:52	43,609	58,750	2,640
		User Preferred Route (UPR) RTE	05:46	43,005	56,841	2,625
		Benefits recorded in planning phase for single flight	00:06	604	1,909	15
A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B77L/ET-AXT	ET513/ABJ-ADD/21JUL'24	Conventional RTE	05:35	35,796	46,218	2,640
		User Preferred Route (UPR) RTE	05:32	35,258	44,485	2,625
		Benefits recorded	00:03	538	1,733	15
A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B787/ET-AOP	ET513/ABJ-ADD/22JUL'24	Conventional RTE	06:00	31,617	40,438	2,642
		User Preferred Route (UPR) RTE	05:58	31,406	40,167	2,625
		Benefits recorded	00:02	211	271	17
A/C Type	Trial FLT Sector/Date	Route	FLT Times	Fuel Burn in KGs	OPS Cost in USD	Distance in Miles
B787/ET-ATH	ET513/ABJ-ADD/23JUL'24	Conventional RTE	05:35	34,973	51,348	2,640
		User Preferred Route (UPR) RTE	05:32	34,707	49,758	2,625
		Benefits recorded	00:03	266	1,590	15

ADD-ABJ Conventional Vs UPR RTE Text

► **Baseline RTE**

HAAB BRO3A BRO DCT KAFIA DCT KITRA UB736 USLOV DCT GATAG DCT LAG
UL433 KETAT DCT ONESI DCT TAVAL TAVAL2D DIAP

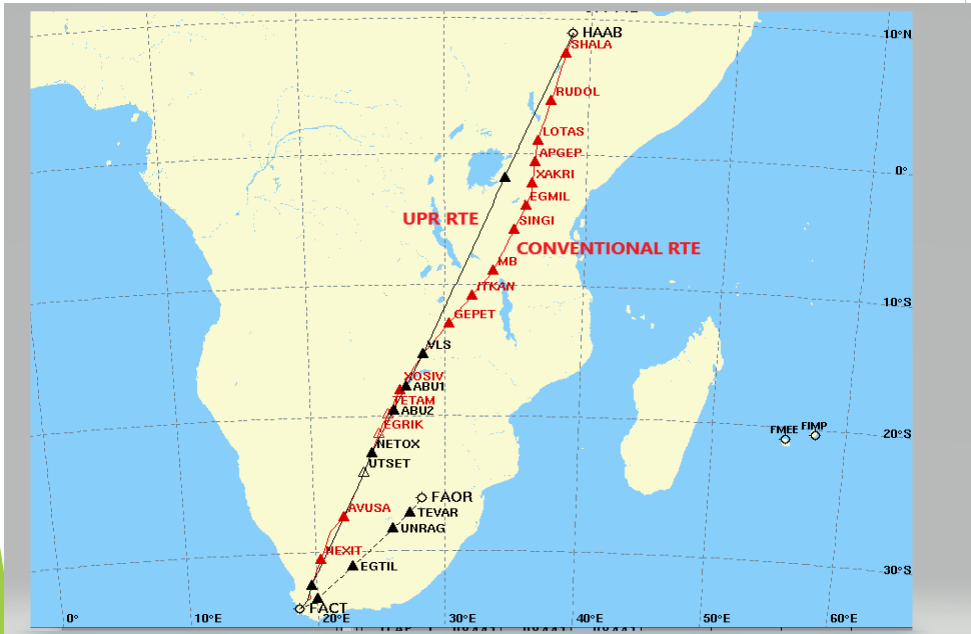
► **UPR RTE**

HAAB DCT ADS DCT BRO DCT KAFIA DCT AKLIS DCT EREKA DCT AD DCT DIAP

ADD-ABJ Conventional Vs UPR RTE Graphical View



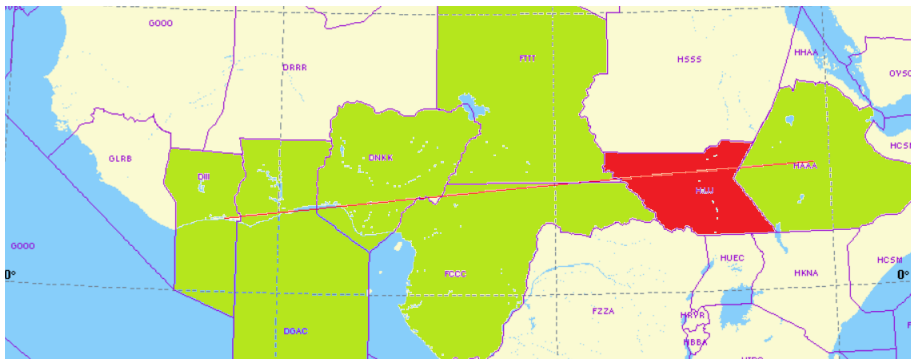
ADD-CPT Conventional Vs UPR RTE Graphical View



UPR TRIAL AREAS (AIRSPACE)

► EAST-WEST & V.V UPR Trial implemented Areas:

Over Addis Ababa, Ndjamena, Brazzaville, Kano, Accra and Abidjan airspaces (Keeping Contingency route over Sudan FIR).



Report from ADD-ABJ Trial Flight operated Pilots on 02NOV'23

20:39

Report from ADD-ABJ Trial Flight operated Pilots on 06FEB'24

- N'Djamena FIR was confused about our route but gave us fly the direct route
- Kano FIR also was confused and ordered us to fly direct FIR exit point "POLTO"
- After contacting Lagos control, we got clearance to fly to our direct route" EREKA".
- Overall, it was good planning. Coordination with ATC needs to improve.

Captain Reports Cont'd

Report from ADD-ABJ Trial Flight operated Pilots on 15MAR'24

Dear joseph greetings,

On 15th of MAR we operated ET 935 under FRA protocole, as it was the second flight along this route, ATC of all sectors untill destination was well aware an cooperative, We saved around 1000kg of fuel and 10 min of flight time.

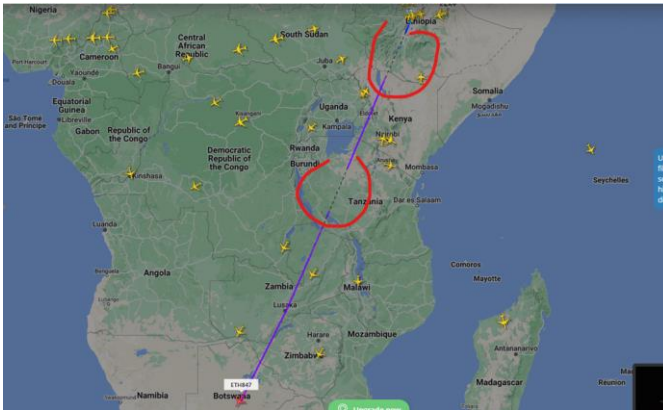
Regards.

Report from ADD-ABJ Trial Flight operated Pilots on 18MAR'24

Greetings I flew eth 512 trial free route. As you plan we were ok until FTTJ fir after that atc was directing us to fir waypoint. doesnot have that much time change same as you planned also the fuel. my concern is with ATC only.
Sent from my iPad

Challenges

- ▶ Occasional occurring of Coordination issue between ANSPs while transferring from FIR to FIR (especially in the initial phases of the trial)
- ▶ Sudan airspace closure (forcing to follow contingency route strictly)
- ▶ Limiting to higher FL in Zambia and Zimbabwe airspace
- ▶ Reporting point confusion for pilots in the UPR RTE
- ▶ Pilots argument to accept DCT UPR RTE in the briefing phase claiming ATC communication reliability and raising their safety concern
- ▶ Still presence of some areas which is out of radar coverage and this creating communication interruption/termination between flights and operators. Look below image for example.



*Thank You
Very Much!!!*