



## **PERFORMANCE WORK STATEMENT**

### **Supplemental Type Certificate (STC) Development and Certification and Associated Project Management**

August 28, 2020  
Version 16.0

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# **1 Introduction**

The Federal Aviation Administration (FAA) Flight Program Operations (AJF) performs multiple missions that require airborne operations, including: Aviation Safety Training (AST); Flight Inspection (FI); Research, Development, Test and Evaluation (RDT&E) support; and Critical Event Response/Transportation.

AJF requires services to accomplish the certification of aircraft modifications and associated project management. The contractor is required to have access to a valid Organization Designation Authorization (ODA) to provide Supplemental Type Certificate (STC) services for modifications to FAA aircraft throughout the performance period of the contract. The work will primarily be accomplished in Oklahoma City, OK or Atlantic City, NJ. Work may also be accomplished at a site selected by the contractor when direct access to the aircraft is not required.

## **1.1 Background**

FAA Flight Program Operations (AJF) maintains and operates a fleet of aircraft in accordance with 14 CFR Part 135 operating. The FAA has an engineering staff that will work with the Contractor to develop the modifications. The Flight Program Operations Aircraft Maintenance Directorate will execute the modification and installation.

The flight inspection mission requires specific equipment to measure signals in space for the flight inspection of Navigational Aids (NAVAIDS), Instrument Flight Procedures (IFP), surveillance systems, lighting systems, and communication systems. The flight inspection system being developed by the FAA is the Modular Mission System (MMS). The MMS is a removable flight inspection system that will allow aircraft to be placed in different mission configurations.

## **1.2 Scope of Work**

AJF requires contract ODA support for the execution of STC approval authority to develop and install the MMS on FAA aircraft, related engineering support, and project management of related projects. AJF requires certification for expected modifications on the Challenger 605/650 Series aircraft with an option for modifications to BE300 and BE350ER/BE360ER aircraft.

A delivery order will be issued for a technical interchange meeting to discuss the certification processes that will be implemented between the contractor and FAA engineering.

If needed, the contractor will be given an opportunity to update their ODA manual with the required authority to issue STCs on CL605/650 aircraft from the regulator. The contractor will request authority from the applicable FAA Aircraft Certification Service if not already held by the contractor. The contractor will be allowed 30 days from the end of the technical interchange meeting to provide a status of their authority.

The authorization to issue STCs on CL605/650 is required before any additional delivery orders will be issued.

The technical details in this PWS are a representative scope of the technical requirements although changes are expected during the Preliminary Design Review (PDR) process.

After the required authority is in place, additional delivery orders will be issued for certification and project management support. The contractor will develop the plan of action and a schedule that addresses identified milestones for STC development and aircraft modifications in cooperation with the FAA Engineering.

STC Authority for the BE300/BE350/BE360 aircraft will not be required in the base year, but may be required for the option years.

- **Task 1:** Technical Interchange/Kickoff meeting
- **Task 2:** STC Authority and Certification
- **Task 3:** Project Management

## **2 Task Requirements**

The FAA (COR) will provide the Contractor with direction on and approval of work on specific actions in coordination with AJF engineering. The Contractor must hold its employees responsible for confirming and abiding by their appropriate chain of command for performing work under this PWS.

The Contractor must hold a valid ODA and operate in compliance with FAA Order 8100.15 (current edition). AJF requires STC services on aircraft certified under 14 CFR Part 23 and 14 CFR Part 25.

### **2.1 Task 1 – STC Authority and Certification**

#### **2.1.1 Subtask 1.1 – Certification Support**

The contractor will perform identified tasks efficiently, accurately, on time, and in compliance with the requirements. The Contractor must participate as a member of a Government-led team as requested by the COR. The Contractor will participate in a Kick-Off meeting between the FAA Stakeholders, COR, and Contractor to review PWS requirements and understand work scope and deliverables. The Contractor must prepare and submit meeting minutes to the FAA that capture the discussions and understandings from the Kick-Off meeting. The Contractor must have the authority exercise the following functions:

- Approve technical data and find compliance to the airworthiness standards
- Issue required STCs and amendments
- Issue airworthiness certificates and approvals
- Establish conformity of articles including test articles
- Determine conformity of test setup

- Determine conformity of installations of articles, including Type Inspection Authorization (TIA) inspections on a product
- Perform compliance inspections
- Approve data for major alterations or major repairs
- Perform review and obtain acceptance of Instructions for Continued Airworthiness

### **2.1.2 Flight Inspection System/Modular Mission System**

The MMS is planned for installation in Challenger 605/650 aircraft, and in the BE350ER/BE360ER aircraft. The MMS will be a removable system, so the aircraft can be readily adapted to other flight program missions. When MMS is deployed, the system will serve as a platform for the flight inspection and research, development, test and evaluation support missions.

The contractor will test, and/or confirm, as appropriate all parts and assemblies to show compliance to all applicable FAA requirements.

#### **2.1.2.1 Modular Mission System Details:**

- Mission Console
  - General Micro System (GMS) Computer
  - Primary single monitor
  - Cortron keyboard/trackball
  - Comm control panel
  - Comm #3 Radio Tune Head (Either Becker or Cobham (B300))
  - Oxygen Mask (Location TBD) connected to Comm
  - On Path & On Course Annunciators located left side, near tabletop for human factors
  - Remaining Annunciators (1) Workstation Power, (2) Computer Reset
  - Miscellaneous USB connectors, terminal rails/blocks, Ethernet jacks, PTT switch
- Mission Rack
  - EDS-300 (TACAN/DME Pulse Analyzer)
  - Wifi
  - Aux 28VDC power jack
  - Ethernet Switch (Parvus 20-10)
  - AB3142 (Ballard Data Collector)
  - EVSF-1000 (Qty 2 - Nav/Marker/GBAS/Spectrum Analyzer Rcvrs)
  - IRIG Timing
  - DGPS (Trimble BX992-Subscription base)
  - DataLink (Not needed if using Trimble BX992 AND subscription)
  - DF Equipment: DIGAR 300
  - Coaxial Switches 3 Total
    - TACAN Top/Bottom
    - GLS Horz/Vert
    - VOR/LOC Front/Back

- Coaxial Splitters (5 Total)
- Circuit Breaker Panel/Box (All 28VDC)
  - 5A IRS (HG2195, Pri 0.9, Sec 1.5A)
  - 5 A Laser Alt (?)
  - 5A GMS Computer (28VDC, 2.4A)
  - 5A Monitor (28VDC @ 2.2A)
  - 2A Ethernet Switch (Parvus 20-10, 12-36VDC, 20W Max – 0.7A@28VDC)
  - 5A Panel Lighting (2A Max)
  - 3A AB3142 (11-36VDC, 0.84-2.73A – 1.1A@28VDC) Data Collector
  - 5A EVSF-1000 #1 (11-32V, Max 3A) #1 NAV
  - 5A EVSF-1000 #2 (11-32V, Max 3A) #2 NAV
  - 7.5A EDS-300 (20-28VDC, Max 5A) DME/TAC
  - 2A DGPS (Possibly Trimble BX992) (9-30VDC, 4.1 W Max – 0.15A@28VDC)
  - 2A Data Link (28VDC, 0.2A (Use converter for 15VDC))
  - 2A Cabin Wifi (1.0 A)
  - 2A VersaSync IRIG Timing (10-32VDC, 10W typ – 0.36A@28VDC)
  - 7.5A TVPS Camera
  - 3A DF Receiver probably DIGAR 300 (2.5A)
  - 2A USB Charging Ports (0.85A @28VDC)
  - 5A Relays & Misc
  - 5A Aux 28VDC Power Jack (Max 3A)
  - 2 A Laser Alt, P/N LD05-A20 (18W, 0.65A@28VDC)
- Communications Systems
  - HF Radios (2 ea, P/N 822-0101-002)
  - VHF Radios (3 ea, P/Ns 822-1468-XXX)
  - UHF/VHF (1 ea, P/N 822-3127-001)
- Other considerations
  - Satphone provisions
  - 110 VAC outlets
  - Becker Audio System (P/N: 822-1468-102)

#### 2.1.2.2 Power Requirements

See Appendix

### 2.1.3 Modification of Challenger 605/650 Aircraft

Modification of the aircraft must be compatible with the installation of the MMS. This will include physical installation and required connections to aircraft systems. The installation will involve modifications that will affect the following areas:

### 2.1.3.1 Antennas

Additional antennas required by the flight inspection system include VHF, UHF, and L-Band for VOR/Localizer, Glideslope, TACAN, DME, GNSS, Direction Finding (DF), and Spectrum Analyzer (S/A). Careful attention is devoted to ensure good placement of these antennas to reduce installation effects and separation from other RF sources.

Each antenna has a unique and complex 3-dimensional and frequency dependent reception/radiation pattern which must be known to calculate and report accurate signal strength. In the addition standard antenna installations provided by the original equipment manufacturer, additional antennas will be required for the STC. The table below lists the known antenna requirements. Additional requirements and adjustments may be needed in the critical design.

Antenna Type	P/N	Station	Body Line	Water Line
GLIDE SLOPE ANTENNA	EAN130-0000-3	STA 160	BL 0.0	WL 86.0
VOR/LOC ANTENNA	DMN4-33-3	STA 169	BL 0.0	WL 81.0
MARKER BEACON ANT	522-0854-003	STA 257.5	BL 0.0	WL 45.0
TACAN/DGPS	S65-1226-6	STA 574	LBL 6.0	WL 43.0
DME	DM N124-10	STA 589	RBL 11.0	WL 44.0
MLS ANTENNAS (MIL)	S65-5366-4M	STA 646.1	RBL/LBL 13.5	WL 53.0
VHF ANTENNA	S65-8280-10	STA 764.0	LBL 5.0	WL 45.0
MLS ANTENNA (MIL)	S65-5366-4M	STA 198.5	RBL/LBL 9.0	WL 99.5
TACAN/UHF #3 ANTENNA	S65-1226-6	STA 456.0	RBL 3.3	WL 150.0
GPS ANTENNA	AT2775-41-TNCF-000-G-NM	STA 497.0	RBL 2.5	WL 150.0
GPS ANTENNA (MIL)	AT2775-41-TNCF-000-G-NM	STA 506.8	LBL 2.5	WL 150.0
VOR/LOC ANTENNA	DMN4-33-3	STA 801.9	LBL 10.0	WL 165.8
VOR/LOC ANTENNA	DMN4-33-3	STA 801.9	LBL 10.0	WL 165.8

### 2.1.3.2 Sensors

Flight inspection system sensors consist of the navigation receivers, inertial reference unit (IRU), radar/laser altimeter, camera system, and pilot marks.

### 2.1.3.3 Operator Console/ Modular Mission System

This is the flight inspection workstation includes seat/harness, table, keyboard/mouse, monitors, fight inspection selections, audio panel, and emergency equipment. Each installation is unique and may have additional characteristics such as radio tuner(s) for the inspector radio(s).

#### 2.1.3.4 Cabin Configuration

The cabin configuration must be able to handle multiple configurations to accomplish all FAA missions. These configurations include with MMS installed, while it is removed and replaced with passenger seating.

## 2.2 Milestones

The Contractor will work with AJF to create certification schedules that includes the milestones listed below:

- Preliminary Design Review (PDR)
- Project Kickoff Meeting With ODA
- ODA STC Board Meeting (Preliminary)
- Project Notification Letter Submittal
- Installation Design Review (CDR)
- Draft Certification Schedule Accepted
- Project Notification Letter Accepted
- Final Certification Schedule Accepted
- Installation Meeting (Preliminary)
- Installation
- Installation Conformity & Testing Complete
- ODA STC Board Meeting (Interim)
- ODA Conformity Inspection Complete
- Begin Request for Issuance of Experimental Airworthiness Certificate
- ODA Ground Testing Complete
- Remove Aircraft Standard Airworthiness Certificate and Issue Experimental Airworthiness Certificate
- ODA Pre-Flight Test Meeting
- ODA Flight Test Complete
- ODA STC Board Meeting (Final)
- STC with approval
- Return Aircraft Certificate to Standard Airworthiness

## 2.3 Subtask 1.3 - Project Management

The Contractor will provide Program and Project Management support for related modification projects. The Contractor must prepare and maintain a Project Management Plan (PMP). The Government will use the PMP to assess the adequacy of the resources the Contractor proposes and will manage to accomplish the requirements of the PWS. The Contractor must provide a PMP to include each task of this PWS as follows:

- Description of the planned schedule to include all milestones and deliverables;



- Identification of each process step required for completing the work;
- The period of time needed to accomplish each step;
- Description of the staffing resources allocated to each task, i.e., staffing plan; and
- Rationale for the project organization, staff utilization, and other resource allocations.
- The Contractor must keep the PMP current and resubmit the PMP for COR approval whenever any proposed changes that result in a schedule impact of more than ten (10) business days.

### **2.3.1 Monthly Status Reports (CDRL A001)**

The Contractor must provide Monthly Status Reports (MSR). The Contractor must provide Monthly Financial Reports (MFR). The report must contain the information below in a contractor provided format:

- Overview of work completed, work in progress, and work planned for each task;
- Hours expended by task, labor category, and personnel;
- Status of individual deliverables;
- Identification of risk areas with recommended remedial actions;
- Status of all outstanding identified risks
- Summary of expenditures by resource and labor category for the monthly reporting period, as well as cumulative year-to-date totals for the performance;
- Any additional information pertinent to the Government in administering the performance of this effort when directed by the COR.

### **2.3.2 Subtask 1.6 - Monthly Financial Reports (CDRL A002)**

The Contractor must provide Monthly Financial Reports (MFRs). The report must contain the information below in a contractor provided format:

- CLINs used during month;
- Cost/hours funded or apportioned by CLIN;
- Cost/hours used by CLIN;
- Projected date when 75% of funds are spent;
- Projected date when funds are exhausted;
- Funds/hours remaining by CLIN;
- Other direct costs (ODCs) estimated, used, and remaining by month; and
- Summary of expenditures by resource and labor category for the monthly reporting period, as well as cumulative year-to-date totals for the performance period.

### **3 End Results/Deliverables**

The Contractor must verify that all submitted deliverables conform to applicable FAA policies, standards, and guidelines as listed in Section 2 and 3 of this PWS.

All days are calendar days unless otherwise specified. The Government's initial review of each deliverable is performed in accordance with the terms listed in the Acceptance Criteria table on next page.

Acceptance Criteria Table			
Task	End Result/Deliverable	Due Date	Acceptance Criteria
<b>1</b>	Technical Interchange/Kick Off Meeting	Technical Interchange/Kick off meeting will be scheduled as soon as practical after award.	Technical Interchange /Kick off meeting may be held at FAA facility in Oklahoma City, OK with access to video conference (if needed). Travel will be authorized for an on-site visit (if required). Kick off meeting will be scheduled for three business days. With two travel days. A Delivery Order will be issued to execute the technical interchange and establish/confirm all required authorization will be in place before the certification and PM Delivery Orders will be issued.
<b>2</b>	Certification Recommendations	Ongoing; Final recommendations as per final schedule.	Engineering recommendations will be evaluated by the Aircraft Maintenance Directorate for approval and acceptance.  Acceptance criteria includes engineering recommendations based on identified modifications that meet regulatory requirements. Acceptance will be determined by the Aircraft Maintenance Directorate.  Options for BE-300 and/or BE350ER certification recommendations will be determined after contract award.
<b>2</b>	Draft Certification Schedule	90 calendar days after award	Draft CL605/650 modification schedule created in coordination with the Aircraft Maintenance Directorate. Draft schedule must address milestones listed in section 3.2  Options for BE-300 and/or BE350ER certification schedule will be determined after contract award.
<b>2</b>	Final Certification Schedule	120 calendar days after award	Final CL605/650 Series modification schedule created in coordination with the Aircraft Maintenance Directorate. Final schedule must address milestones listed in section 3.2
<b>2</b>	Project Notification Letter	As per final schedule	Project approval by FAA Aircraft Certification Service
<b>2</b>	Aircraft Certification	As per final schedule	Approval of CL605/650 STC Certificate and Supporting Data
<b>2</b>	Airworthiness Certificate	As per final schedule	Approval of CL605/650 Airworthiness Certificate for aircraft with completed modifications
<b>3</b>	Project Management Plan (PMP)	15 days calendar after award; Updates within 5 days whenever any proposed changes are expected to result in a schedule impact of ten (10) days or more	The PMP is accurate, complete, submitted on time in the COR approved format and is prepared in accordance with PWS
<b>3</b>	Monthly Financial Reports	10th day of 1st full month following contract start; Every 10th day of each month thereafter. If 10 <sup>th</sup> is a weekend, report due the next business day.	The Monthly Financial Reports are accurate, complete, submitted on time in the COR approved format and is prepared in accordance with PWS
<b>3</b>	Close Out Meeting Documentation and Meeting Minutes	Documentation - 5 days prior to the Close Out Meeting  Meeting Minutes - Within 5 days after the Close Out Meeting	Close Out Meeting Minutes capture all relevant topics discussed and summarize contractor's understanding of close out work scope and PWS requirements. Contractor format acceptable, meets COR approval of content, and is prepared in accordance with PWS

## **5 Period of Performance**

The Period of Performance is one (1) Base year with four (4) 1-year options to be exercised at the discretion of the FAA.

## **6 Place of Performance**

The Contractor will perform work enumerated throughout this PWS at FAA designated facilities when access to FAA aircraft is required. The contractor may accomplish the work at a contractor designated site when able, at the discretion of the FAA. When the ODA Administrator and unit members are working remotely, communication with the Aircraft Maintenance Directorate will be via online meetings, emails and voice calls.

## **7 Travel**

Travel will be required to Oklahoma City, OK, Atlantic City, NJ and other locations defined by the COR to complete the project. Workload may be organized to minimize travel requirements and maximize work being completed at a facility designated by the contractor, but must be within the United States.

Travel must be authorized by the CO in advance of the start of the travel. FAA travel policy details are provided in the contract, travel and per diem section.

Travel estimates are based on anticipated travel to have required in-person meetings and access to aircraft and data in Oklahoma City, OK, and possibly in Atlantic City, NJ.

Due to COVID, most interchanges will be virtual, but FAA recognizes some in person meetings may be required.

## **8 Over and Above**

Over and above costs of \$10,000 per year provided in case of unforeseen requirements related to data gathering, materials or shipping costs. Contractor must obtain written approval from the CO or COR before any over and above costs are accrued.

## **9 Qualifications**

### **9.1 Organizational Qualifications**

AJF requires an active ODA, as well as STC experience on aircraft certified under 14 CFR Part 25 during the last five years from the date proposals are due for submission in accordance with the SIR. Approval to apply ODA Authority to Challenger 605/650 aircraft must be in place within 30 days of contract award.

### **9.2 Labor Category Qualifications**

The contractor shall provide personnel, services, and supervision for persons in the following labor categories.

### **9.2.1 ODA Administrator**

The ODA administrator must be appointed in accordance with FAA Order 8100.15 (current edition). The ODA administrator must have technical experience with the functions performed under the ODA and a broad range of management experience. This experience must enable the ODA administrator to manage the entire ODA unit activities effectively.

### **9.2.2 ODA Unit Members**

At least one engineering or flight test ODA unit member must meet the qualifications for a Designated Engineering Representative (DER). The FAA defines these qualifications in FAA Order 8100.8 (current edition), Designee Management Handbook. The ODA unit members need to meet only those requirements for the functions and areas they will perform. However, the requirement to have direct working experience with the FAA may be satisfied by having direct working experience within an ODA holder's or other delegated organization. The following unit member expertise will be required:

- Engineering Unit Member - Electrical
- Engineering Unit Member - Mechanical
- Engineering Unit Member - Structural
- Test Pilot Unit Member
- Inspecting Unit Member - Electrical
- Inspecting Unit Member - Structural
- Inspecting Unit Member - Airworthiness

### **9.2.3 Project Manager**

The assigned project manager must hold a bachelor's degree in management, business or a related field, and related experience.

## **10 Other Requirements**

The FAA will provide adequate office and meeting space, internet connection, utilities, telephone, and related services while working on the tasks at a FAA facility.

The FAA will provide access to credentials and FAA-issued hardware (Government Furnished Equipment (GFE) if un-escorted access to FAA facilities and access to the FAA network (VPN) is determined to be required. This determination will be made at the kick-off meeting.

Security screening/background checks will be required per U.S. Government policy as detailed on the contract.

The FAA will furnish pertinent information related to tasks a required to accomplish the tasks described in this PWS.

The Contractor must return all GFE to the FAA prior to contract close out or earlier when directed by the COR.

## Appendix – Power requirements

Total Load Normal Operation		Loading Chart					Availability Chart				
AC SUMMARY (KVA)											
POWER SOURCE/ BUS POWERED	DESIGN										
<b>GEN 1</b>	<b>30</b>	<b>16.55</b>	<b>14.93</b>	<b>21.74</b>	<b>15.92</b>	<b>21.61</b>	<b>13.45</b>	<b>15.07</b>	<b>8.26</b>	<b>14.08</b>	<b>8.39</b>
AC BUS 1		1.07	0.82	6.67	1.75	6.67					
AC UTILITY BUS 1	8	7.59	7.59	7.59	7.24	7.59	0.41	0.41	0.41	0.76	0.41
AC ESSENTIAL BUS	8	3.13	2.33	3.33	2.75	3.10	4.87	5.67	4.67	5.25	4.90
TRU 1	3.45	2.73	2.51	2.51	2.52	2.57	0.72	0.94	0.94	0.93	0.88
ESS TRU 1	3.45	2.02	1.68	1.64	1.65	1.68	1.43	1.77	1.81	1.80	1.77
<b>GEN 2</b>	<b>30</b>	<b>19.39</b>	<b>17.25</b>	<b>21.22</b>	<b>18.19</b>	<b>21.37</b>	<b>10.61</b>	<b>12.75</b>	<b>8.78</b>	<b>11.81</b>	<b>8.63</b>
AC BUS 2		12.71	11.12	15.09	12.04	15.17					
AC UTILITY BUS 2	8	2.81	2.81	2.81	2.81	2.81	5.19	5.19	5.19	5.19	5.19
TRU 2	3.45	1.85	1.64	1.68	1.68	1.71	1.60	1.81	1.77	1.77	1.74
ESS TRU 2	3.45	2.02	1.68	1.64	1.65	1.68	1.43	1.77	1.81	1.80	1.77
Flight inspection system TRU	3.45	0.01	0.01	0.01	0.01	0.01	3.44	3.44	3.44	3.44	3.44
<b>APU GEN</b>	<b>30</b>	INOP	INOP	INOP	INOP	INOP	INOP	INOP	INOP	INOP	INOP
<b>ADG</b>	<b>15</b>	INOP	INOP	INOP	INOP	INOP	INOP	INOP	INOP	INOP	INOP
AC BUS 1 + AC BUS 2 + AC ESSENTIAL BUS	<b>30</b>	16.91	14.27	25.09	16.54	24.94	13.09	15.73	4.91	13.46	5.06
DC SUMMARY (Amps)											
POWER SOURCE/BUS POWERED	DESIGN										
<b>TRU 1</b>	<b>100</b>	<b>78.86</b>	<b>72.32</b>	<b>72.36</b>	<b>72.82</b>	<b>74.07</b>	<b>21.14</b>	<b>27.68</b>	<b>27.64</b>	<b>27.18</b>	<b>25.93</b>
DC BUS 1	50	50.69	44.15	44.19	44.65	45.90	-0.69	5.85	5.81	5.35	4.10
DC UTILITY 1	50	28.17	28.17	28.17	28.17	28.17	21.83	21.83	21.83	21.83	21.83
<b>TRU 2</b>	<b>100</b>	<b>53.35</b>	<b>47.19</b>	<b>48.45</b>	<b>48.52</b>	<b>49.42</b>	<b>46.65</b>	<b>52.81</b>	<b>51.55</b>	<b>51.48</b>	<b>50.58</b>
DC BUS 2	50	38.03	31.87	33.13	33.20	34.10	11.97	18.13	16.87	16.80	15.90
DC UTILITY 2	50	15.32	15.32	15.32	15.32	15.32	34.68	34.68	34.68	34.68	34.68
<b>ESS TRU 1</b>	<b>100</b>	<b>58.22</b>	<b>48.49</b>	<b>47.21</b>	<b>47.69</b>	<b>48.37</b>	<b>41.78</b>	<b>51.51</b>	<b>52.79</b>	<b>52.31</b>	<b>51.63</b>
ESSENTIAL BUS (50%)	50	26.75	27.50	26.92	26.88	27.23	23.25	22.50	23.08	23.12	22.77
BATTERY BUS (50%)	50	31.47	20.99	20.29	20.81	21.14	18.53	29.01	29.71	29.19	28.86
EMERGENCY BUS (25%)	20	0.00	0.00	0.00	0.00	0.00	20.00	20.00	20.00	20.00	20.00
<b>ESS TRU 2</b>	<b>100</b>	<b>58.22</b>	<b>48.49</b>	<b>47.21</b>	<b>47.69</b>	<b>48.37</b>	<b>41.78</b>	<b>51.51</b>	<b>52.79</b>	<b>52.31</b>	<b>51.63</b>
ESSENTIAL BUS (50%)	50	26.75	27.50	26.92	26.88	27.23	23.25	22.50	23.08	23.12	22.77
BATTERY BUS (50%)	50	31.47	20.99	20.29	20.81	21.14	18.53	29.01	29.71	29.19	28.86
EMERGENCY BUS (25%)	20	0.00	0.00	0.00	0.00	0.00	20.00	20.00	20.00	20.00	20.00
<b>APU BATTERY</b>	<b>N/A</b>	<b>0.43</b>	<b>0.43</b>	<b>0.43</b>	<b>0.43</b>	<b>0.43</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
APU BATTERY DIRECT		0.43	0.43	0.43	0.43	0.43					
EMERGENCY BUS (50%)		0.00	0.00	0.00	0.00	0.00					
<b>MAIN BATTERY</b>	<b>N/A</b>	<b>8.63</b>	<b>1.50</b>	<b>1.50</b>	<b>1.50</b>	<b>1.50</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
MAIN BATTERY DIRECT		8.63	1.50	1.50	1.50	1.50					
<b>FIS TRU</b>	<b>100</b>	<b>20.25</b>	<b>20.25</b>	<b>20.25</b>	<b>20.25</b>	<b>20.25</b>	<b>79.75</b>	<b>79.75</b>	<b>79.75</b>	<b>79.75</b>	<b>79.75</b>
Flight inspection system TRU	35	20.25	20.25	20.25	20.25	20.25	14.75	14.75	14.75	14.75	14.75
DC BUS 1 + DC BUS 2	100	88.72	76.02	77.32	77.85	80.00	11.28	23.98	22.68	22.15	20.00
ESSENTIAL BUS + BATTERY BUS	88	116.44	96.98	94.42	95.38	96.74	-28.44	-8.98	-6.42	-7.38	-8.74
UTIL BUS 1 GALLEY FEED 1	25	5.50	5.50	5.50	5.50	5.50	19.50	19.50	19.50	19.50	19.50
UTIL BUS 1 GALLEY FEED 2	25	13.34	13.34	13.34	13.34	13.34	11.66	11.66	11.66	11.66	11.66
UTIL BUS 2 GALLEY FEED 1	25	7.72	7.72	7.72	7.72	7.72	17.28	17.28	17.28	17.28	17.28
UTIL BUS 2 GALLEY FEED 2	25	1.90	1.90	1.90	1.90	1.90	23.10	23.10	23.10	23.10	23.10

