**Exhibit R-2**, **RDT&E Budget Item Justification:** PB 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced

PE 0604858F I Tech Transition Program

Component Development & Prototypes (ACD&P)

COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	48.194	79.004	246.514	-	246.514	288.148	416.547	525.555	598.930	Continuing	Continuing
645350: Transition Prioritization	-	48.194	79.004	246.514	-	246.514	288.148	416.547	525.555	598.930	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

#### A. Mission Description and Budget Item Justification

The Technology Transition Program (TTP) provides funding to mature and demonstrate technologies to enable or accelerate their transition to legacy or acquisition programs of record. It addresses the gap that exists between when a technology is first demonstrated and when it can be successfully acquired as an operational capability. TTP bridges that gap by funding promising system and subsystem concepts for technology integration and demonstration to continue beyond the laboratory. It allows acquisition program managers (the developers and providers) and warfighters (the end users) to integrate, prototype, and demonstrate candidate technologies and assess them in an operational environment. As a result, the warfighters can assess the capability first-hand and accurately fund the follow-on acquisition program during the next budgeting cycle. TTP includes research and development funds for the following transition activities: prototyping of promising, high-priority concepts and technologies in an operational environment to lower acquisition risk by raising the technology readiness level; performing pre-acquisition systems engineering to facilitate transition from a demonstration program into acquisition programs of record; assessing interface requirements of candidate concepts, technologies, and demonstration projects to better understand true engineering costs resulting from insertion of new technologies into the Air Force architecture; and capturing data through information technology tools and databases to help formulate strategies and gather proposals for development that have the potential to perform Department of Defense (DoD) missions. The program provides funding to mature adaptive turbine engine technologies for next generation propulsion systems. The program will leverage adaptive turbine engine science and technology demonstrations to develop a multi-platform common adaptive engine built around a commercially derived core. It will enable multiple high confidence engine acquisition programs.

This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2016	Air Force			Date:	February 2015
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force Component Development & Prototypes (ACD&P)	e I BA 4: Advanced	_	ement (Number/Name) Fech Transition Program		
B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	48.636	59.004	78.153	-	78.153
Current President's Budget	48.194	79.004	246.514	-	246.514
Total Adjustments	-0.442	20.000	168.361	-	168.361
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>	-	20.000			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
<ul> <li>Reprogrammings</li> </ul>	-	-			
<ul> <li>SBIR/STTR Transfer</li> </ul>	-0.442	-			
Other Adjustments	_	_	168.361	-	168.361

### **Congressional Add Details (\$ in Millions, and Includes General Reductions)**

Project: 645350: Transition Prioritization

Congressional Add: Alternative Energy Research

	FY 2014	FY 2015
	-	
	35.000	20.000
Congressional Add Subtotals for Project: 645350	35.000	20.000
Congressional Add Totals for all Projects	35.000	20.000

### **Change Summary Explanation**

FY16 increase due to accelerated funding to support Adaptive Engine Transition Program.

			I
C. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
Title: Propulsion Technology Transition	12.306	57.854	243.670
Description: Next generation jet engine technology.			
FY 2014 Accomplishments: Completed component risk reduction and core engine prelimenary design. Continued preliminary engine design activities, as well as weapons systems integration, common core studies, and material manufacturing readiness activities.			
FY 2015 Plans:			

PE 0604858F: Tech Transition Program

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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced	PE 0604858F / Tech Transition Program	
Component Development & Prototypes (ACD&P)		

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
Complete preliminary design reviews of engine concepts to mature adaptive engine technologies and manufacturing readiness.			
Purchase materials and hardware to support adaptive engine component rig tests and future adaptive engine core tests.			
FY 2016 Plans:			
Complete adaptive engine component rig tests. Begin and complete adaptive engine core tests.			
Title: Sustainment Technology Transition Technology	0.888	1.150	2.844
Description: Product support and sustainment technologies.			
FY 2014 Accomplishments:			
Continued protoype of high-priority concepts and technologies in an operational or operational-like environment.			
FY 2015 Plans:			
Continue prototype of high-priority concepts and technologies in an operational or operational-like environment.			
FY 2016 Plans:			
Prototype high-priority concepts and technologies in an operational or operational-like environment.			
Accomplishments/Planned Programs Subtotals	13.194	59.004	246.514

	FY 2014	FY 2015
Congressional Add: Alternative Energy Research	35.000	20.000
FY 2014 Accomplishments: Conducted congressionally directed effort.		
FY 2015 Plans: Conducted congressionally directed effort.		
Congressional Adds Subtotals	35.000	20.000

#### D. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

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## E. Acquisition Strategy

Technology Transition Program (TTP) enables a more effective and prioritized transition of technologies to the warfighter. It allows more accurate cost estimating and more comprehensive systems integration to occur through the use of prototypes and user assessments until the sponsoring major command can incorporate the technology into their subsequent budget submission. The Air Force, through appropriate program offices, will manage the acquisition and development process for the integration and fielding of Service Acquisition Executive approved TTP projects.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 Program Element (Number/Name) PE 0604858F I Tech Transition Program	
F. Performance Metrics  Please refer to the Performance Base Budget Overview Book for information of Force performance goals and most importantly, how they contribute to our mis		resources are contributing to Air

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Appropriation/Budgo 3600 / 4	et Activity	<i>'</i>							umber/Na sition Prog			(Numbei I Transitio		zation	
Product Developme	nt (\$ in M	illions)		FY 2	2014	FY 2	2015	FY 2 Ba	2016 se		2016 CO	FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Sustainment Technology Transition	Various	TBD : TBD,	-	-		1.150	Jul 2015	2.844	Jul 2016	-		2.844	Continuing	Continuing	-
Propulsion Technologies	C/CPFF	GE and P&W : Various,		13.194	Oct 2013	57.854	Oct 2014	243.670	Jun 2016	-		243.670	Continuing	Continuing	TBD
Congressional Add	C/CPAF	Various : ,	-	35.000	Aug 2015	20.000	Aug 2016	-		-		-	Continuing	Continuing	-
		Subtotal	-	48.194		79.004		246.514		-		246.514	-	-	-
Support (\$ in Million	ıs)			FY 2	2014	FY 2	2015	FY 2 Ba	2016 se	FY 2	2016 CO	FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-
Test and Evaluation	(\$ in Milli	ons)		FY 2	2014	FY 2	2015	FY 2 Ba			2016 CO	FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	_
Management Servic	es (\$ in M	illions)		FY 2	2014	FY 2	2015	FY 2 Ba	2016 se		2016 CO	FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-
			Prior Years	FY 2	2014	FY 2	2015	FY 2 Ba			2016 CO	FY 2016 Total	Cost To	Total Cost	Target Value of Contract
		Project Cost Totals		48.194		79.004		246.514		_		246.514	_	_	_

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xhibit R-4, RDT&E Schedule Profile: PB 20	316 Air For	се																			Dat	te: F	ebru	ary	201	5	
Appropriation/Budget Activity 3600 / 4							` ' ' ' '											•	(Number/Name) I Transition Prioritization								
	F	Y 201	4		FY 2	2015			FY 2	2016	<b>i</b>		FY 2	2017		-	FY 2	018			FY	201	9		FY	2020	)
	1	2 3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Sustainment Technology Transition			,	,	,		ĺ																				
Propulsion Technology Transition																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015		
Appropriation/Budget Activity	R-1 Program Element (Number/Name) Project (Number/Name)				
3600 / 4	PE 0604858F I Tech Transition Program	645350 <i>I T</i>	ransition Prioritization		

## Schedule Details

	Sta	End				
Events	Quarter	Year	Quarter	Year		
Sustainment Technology Transition	1	2016	4	2020		
Propulsion Technology Transition	1	2014	4	2020		

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