



Commercial Crew Program CCDev 2 Milestone Schedule




















Commercial Crew Program CCDev 2 Schedule			Legend: ▼ = Completion Date ▽ = Current Plan Date					
Funding	Milestone	Completion Date	2011			2012		
			Q2'11	Q3'11	Q4'11	Q1'12	Q2'12	Q3'12
Total: \$105.6M	Sierra Nevada							
\$12.5M	1 - SRR	06/02/2011	▼					
\$2.5M	2 - Canted Airfoil Fin Selection	06/16/2011	▼					
\$5M	3 - Cockpit Based Flight Simulator	07/20/2011		▼				
\$10M	4 - Vehicle Avionics Integration Laboratory	09/22/2011			▼			
\$12.5M	5 - System Definition Review (SDR)					▽		
\$7.5M	6 - Flight Control Integration Laboratory					▽		
\$12.5M	7 - Engineering Test Article (ETA) Structure Delivery					▽		
\$4.5M	10 - Captive Carry Interface & ETA Landing Gear Drop Tests						▽	
\$5M	8 - Separation System Test						▽	
\$6M	11 - ETA Captive Carry Flight Test Readiness Review						▽	
\$7.1M	12 - ETA Captive Carry Flight Test							▽
\$12.5M	9 - Preliminary Design Review (PDR)							▽
\$8M	13 - ETA Free Flight Test							▽



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Total: \$112.9M	Boeing							
\$10M	1 - NASA Kickoff	04/20/2011						
\$10M	2 - Delta Systems Definition Review (SDR) Complete	05/19/2011						
\$15M	3 - Phase 0 Safety Review Complete	06/16/2011						
\$10M	7 - Interim Design Review (IDR) - 4	07/14/2011						
\$7.5M	5 - Landing Air Bag Drop Demo #1	08/26/2011						
\$7.5M	10a - Launch Vehicle Emergency Detection System/Avionics System Integration Facility Interface Simulation Test Phase 1							
\$5M	6 - Phase 1 Wind Tunnel Tests							
\$7.5M	10b - Launch Vehicle Emergency Detection System/Avionics System Integration Facility Interface Simulation Test Phase 2							
\$10M	4 - Launch Abort Engine (LAE) Fabrication and Hot Fire Test Demo							
\$4.8M	8 - Parachute Drop Test Demonstration							
\$2.5M	9 - Service Module (SM) Propellant Tank Develop Tests							
\$2.5M	11 - Preliminary Design Review (PDR) Complete							
\$15.2M	12 - Software Preliminary Design Review (PDR)							
\$4.2M	13 - Orbital Maneuvering and Abort Control (OMAC) Hot Fire Test Complete							
\$1.2M	14 - Service Module (SM) Propulsion Cold Flow Tests Complete							



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			Q2'11	Q3'11	Q4'11	Q1'12	Q2'12	Q3'12
Total: \$75M	SpaceX							
\$10M	1 - CCDev2 Kickoff	05/05/2011						
\$5M	2 - Launch Abort System (LAS) Propulsion Conceptual Design Review	07/26/2011						
\$15M	3 - Design Status Review (DSR) 1	08/17/2011						
\$10M	4 - LAS Propulsion Components Preliminary Design Review (PDR)	09/20/2011						
\$15M	6 - Design Status Review (DSR) 2							
SpaceX Funded	5 - Crew Accommodation Concept Prototype and In-Situ Trial 1							
SpaceX Funded	7 - Crew Accommodation Concept Delta-Prototype and In-Situ Trial 2							
\$5M	8 - LAS Propulsion Component Test Articles Complete							
\$10M	10 - Concept Baseline Review (CBR)							
\$5M	9 - LAS Propulsion Component Initial Test Cycle							



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Total: \$22.005M	Blue Origin							
\$.905M	1 - Space Vehicle (SV) Kickoff Meeting	05/20/2011	▼					
\$2M	2 - Pusher Escape Kickoff Meeting	05/20/2011	▼					
\$3.4M	3 - Reusable Booster System (RBS) Engine Kickoff Meeting	05/20/2011	▼					
\$4M	5 - RBS Engine Thrust Chamber Assembly (TCA) Interface and Test Plan Review				▼			
\$.9M	4 - Space Vehicle Mission Concept Review (MCR)				▼			
\$3M	7 - Pusher Escape Ground Firing					▽		
\$2M	6 - Pusher Escape Test Vehicle #1 Shipment						▽	
\$1.9M	8 - Pusher Escape Pad Escape Test							▽
\$.9M	9 - Space Vehicle System Requirements Review (SRR)							▽
\$3M	10 - RBS Engine Thrust Chamber Assembly (TCA) Test							▽



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Unfunded	ULA								
	1 - Launch Vehicle Certification Kickoff	07/18/2011		▼					
	2 - Design Equivalency Review (DER) Summary Review	09/20/2011			▼				
	3 - Probabilistic Risk Assessment (PRA) Review					▽			
	4 - Tailored System Requirements Review (SRR)					▽			
	5 - System Requirements Review (SRR)						▽		
Unfunded	ATK								
	1 - Launch Service Kickoff Review	09/15/2011		▼					
	2 - Technical Interchange Meeting 1					▽			
	3 - Launch System Initial System Design (ISD)					▽			
	4 - Technical Interchange Meeting 2						▽		
	5 - Program Status Review (PSR)						▽		