

The Oracle Aerospace & Defense Solution  
Progress Billings For Maximum Cash Flow



## Introduction

U.S. Government contracts have unique billing requirements that the Oracle e-Business Suite needs to support for Aerospace and Defense (A&D) contractors. A&D contractors usually operate in an Engineer-to-Order (ETO) and project-based environment. Frequently, they work on a limited number of large projects that span a number of years. Since most A&D companies do not have sufficient cash flow to finance such large projects, the U.S. Government instituted the practice of Progress Billing to help contractors maintain a positive cash position while executing projects.

Under progress billing, the government funds the contractor by making payments to the contractor before a contract item is completed and delivered. Under the terms of the contract, the contractor incurs costs and periodically submits progress billings to the government or customer. The government may then pay the progress bill and recoup or “liquidate” the progress payment when a contract item or a milestone is delivered or achieved.

Typically on large contracts, milestones are established to note significant contractual events such as finalization of design, purchase of all raw materials, delivery of first item, etc. Contractors typically are entitled to receive payment for achieving such milestones and will submit billings to this effect. As milestones may be months if not years apart, contractors may submit progress billings on, for example, a monthly basis in order to recover costs incurred on a contract in advance of a milestone payment.

Progress billing requires creating a series of invoices over time for the same contract. On large contracts or programs, such as designing and building a space station, the contract’s deliverable end product may be the space station itself, and there may be many milestone deliveries between the start and the completion of the contract. An ERP system must enable a contractor to establish billing milestones and then allow for the creation of progress billing invoices at regular intervals during the contract’s life. In addition, the system needs to allow for progress billings to be based on cost incurred, hours completed, or other agreed upon reference events. Also, the contractor needs to have the capability to view cash flow projections by contract.

Another challenge of A&D contracting is revenue recognition. The ERP package must enable the A&D contractor to recognize revenue as it is earned, even though the project is not yet completed. This is crucial because the revenue must be tracked in the same period as the expense to remain in compliance with Generally Accepted Accounting Principles (GAAP).

## Progress Payments

Federal Acquisition Regulation (FAR) Part 32, Contract Financing, defines the policies and procedures whereby the government may assist contractors by funding contract efforts. For delivery-type contracts, the government may reimburse contractors for costs incurred prior to the delivery of goods or services. Contractors are to request progress payments by submitting Standard Form (SF) 1443, Contractor's Request for Progress Payments, in accordance with instructions and include other additional information as requested by the contracting officer. Progress payments may be either customary or unusual. Customary progress payments typically use: (1) an 80% progress payment rate; (2) a cost base (e.g., percentage-of-completion or incurred cost); (3) a specified frequency of payment; and (4) an ordinary liquidation method. Any other progress payments are considered unusual and may be used only in exceptional cases when authorized.

*Through the use of the client extension feature in **Oracle Projects**, and other Oracle reporting tools, contractors can perform the calculations necessary to issue a progress payment request to the government using SF1443. Oracle Projects provides the facility to capture the unique data elements that accompany this method of contract financing. Additionally, SF1443 forms may be generated either through Oracle Reports or Oracle partner MilPac, a leader in the government forms generation.*

Client extensions extend the functionality of Oracle Projects. Client extensions are supported features within the product and are easily upgraded between product releases. Client extensions are not customizations. Using client extensions, Oracle Projects may be tailored to capture the data required, perform the necessary calculations, and generate progress billings.

## Progress Billings on Fixed Price Contracts

Contractors bill fixed-price contract lines at the agreed-upon contract price regardless of actual cost incurred on the contract. Billings on fixed-price contracts are usually referred to as shipment, deliverable, or milestone billings because one of these events usually triggers the billing. Form DD250, Material Inspection and Receiving Report, a type of bill of lading, often accompanies fixed-price billings on U.S. Government contracts.

*DD250 forms may be generated either by Oracle Reports or Oracle's partner MilPac.*

Some fixed-price U.S. Government contracts specify that the contractor can request progress payments for a percentage of cost incurred prior to the shipment of the contract deliverable or achievement of the milestone. When the actual delivery invoice is prepared, progress payments are applied or liquidated at a rate that is usually equal to the progress payment rate. Progress payment requests are submitted cyclically, usually monthly, on an SF1443.

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A contract may have multiple contract lines (CLIN's) with several different billing methods. Contractors must be able to identify the CLIN's that are eligible for progress payments in order to accumulate the cost associated with those lines. The following costs may be included when incurred:

- (1) Materials issued from stores inventory and placed in the production process for use on the contract.
- (2) Direct labor, direct travel, and other direct in-house costs.
- (3) Properly allocable and allowable indirect costs.
- (4) Cost of Money

*Oracle Projects and Oracle Project Contracts enable contractors to accumulate costs by CLIN.*

Unless a contractor requests a smaller amount, progress payments are computed at the rate stipulated in the progress payment clause of the contract, using the total billable costs of contract lines for which progress payments apply. The contractor may add to this amount one hundred percent of the unliquidated progress payments made to subcontractors or other company divisions. The progress payment request must also be adjusted for the sum of all previously received progress payments. When contract deliverables are invoiced, progress payments previously collected are "liquidated" against the delivery invoice. As previously noted, the liquidation rate is usually the same as the progress payment rate unless the customer has approved an alternate liquidation rate.

SF1443 instructions state that costs eligible for progress payments (primarily cost for material) must have been paid (i.e., cash has been disbursed). This requirement has been eliminated for new contracts.

## Billing Support for Progress Payments

Progress billings should include the following:

1. Identification of contract and CLIN
2. Identification of contract-to-date billable costs at the contract level
3. Exclusion of unbillable costs (i.e., costs for a T&M CLIN) for progress payments, but inclusion of same costs as billable on T&M billing
4. Application of "approved billing rates" – overhead (burden) rates which have been agreed to by the customer
5. Collection of subcontractor advances and liquidations
6. Identification of total amount of previously billed progress payments
7. Collection of amount of contract deliverables invoiced before liquidation
8. Collection of amount of progress payments liquidated on deliverable invoices
9. Passing above to third-party forms

## Billing Example

Assumptions: Fixed Firm Price (FFP) Contract for \$20M with three hardware deliverables for \$5M, \$6M and \$9M eligible for Progress Payments @ 80% of cost (government-established rate). CTD = Contract to Date. Total Progress Payments cannot exceed 80% (government-established liquidation rate) of the contract value. Advances to Subcontractors represent progress payments for which you have not yet received delivery of material.

Period	CTD Cost Incurred	Amount	%	Progress Payment Request
March 31 <sup>st</sup>	Labor, Material, Overhead	\$ 2,000,000	80	\$ 1,600,000
	Advance to Subcontractors	\$ 50,000	100	\$ 50,000
	<b>Total</b>			<b>\$ 1,650,000</b>
April 30 <sup>th</sup>	Labor, Material, Overhead	\$ 3,500,000	80	\$ 2,800,000
	Advance to Subcontractors	\$ 125,000	100	\$ 125,000
	-/- Previous Progress Payment Request			\$ 1,650,000
	<b>Total</b>			<b>\$ 1,275,000</b>
May 31 <sup>st</sup>	Labor, Material, Overhead	\$ 7,000,000	80	\$ 5,600,000
	Advance to Subcontractors	\$ 400,000	100	\$ 400,000
	-/- Previous Progress Payment Request			\$ 2,925,000
	<b>Total</b>			<b>\$ 3,075,000</b>
Jun 1 <sup>st</sup>	Collect All Progress Payment Requests			
	March 31 <sup>st</sup>	\$ 1,650,000		
	April 30 <sup>th</sup>	\$ 1,275,000		
	May 31 <sup>st</sup>	\$ 3,075,000		
	<b>Total</b>			<b>\$ 6,000,000</b>
Jun 5 <sup>th</sup>	Ship 1 <sup>st</sup> deliverable - CLIN Price is	\$ 5,000,000		
	-/- Liquidation @ 80%	\$ 4,000,000		
	<b>Invoice Amount</b>			<b>\$1,000,000</b>
Jun 30 <sup>th</sup>	<b>Total Progress Payments Collected</b>	\$ 6,000,000		
	<b>-/- Total Liquidation</b>	\$ 4,000,000		
	<b>Total Unliquidated</b>			<b>\$ 2,000,000</b>
	Labor, Material, Overhead	\$ 10,000,000	80	\$ 8,000,000
	Advance to Subcontractors	\$ 400,000	100	
	-/- Sub Liquidation (for materials received)	\$ 300,000		
	Unliquidated Sub Advance		100	\$ 100,000
	-/- Previous Progress Payment Request			\$ 6,000,000
	<b>Total</b>			<b>\$ 2,100,000</b>
Jul 1 <sup>st</sup>	Collect All Progress Payments - Jun 30 <sup>th</sup>			\$ 2,100,000
Jul 10 <sup>th</sup>	Ship 2 <sup>nd</sup> deliverable - CLIN Price is	\$ 6,000,000		
	Lesser of:			
	-/- Liquidation @ 80%	\$ 4,800,000		
	-/- Unliquidated Progress Payments	\$ 4,100,000		
<b>Total Invoice Amount</b>			<b>\$ 1,900,000</b>	
Jul 31 <sup>st</sup>	<b>Total Progress Payments Collected</b>	\$ 8,100,000		
	<b>-/- Total Liquidation (Jun 5<sup>th</sup> + Jul 10<sup>th</sup>)</b>	\$ 8,100,000		
	<b>Total Unliquidated</b>			<b>\$ 0</b>

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Period	CTD Cost Incurred	Amount	%	Progress Payment Request
	Labor, Material, Overhead	\$ 16,000,000	80	\$ 12,800,000
	Advance to Subcontractors	\$ 1,000,000	100	
	-/- Sub Liquidation (for materials received)	\$ 400,000		
	Unliquidated Sub Advance		100	\$ 600,000
	-/- Previous Progress Payment Request			\$ 8,100,000
	<b>Total</b>			<b>\$ 5,300,000</b>
Aug 1 <sup>st</sup>	Collect All Progress Payments - Jul 31 <sup>st</sup>			\$ 5,300,000
Aug 31 <sup>st</sup>	<b>Total Progress Payments Collected</b>	\$ 13,400,000		
	<b>-/- Total Liquidation</b>	\$ 8,100,000		
	<b>Total Unliquidated</b>			<b>\$ 5,300,000</b>
	Labor, Material, Overhead	\$ 18,275,000	80	\$ 14,620,000
	Advance to Subcontractors	\$ 1,000,000	100	
	-/- Sub Liquidation	\$ 1,000,000		
	Unliquidated Sub Adv.		100	\$ 0
	-/- Previous Progress Payment Request			\$ 13,400,000
	<b>Total</b>			<b>\$ 1,220,000</b>
Sep 1 <sup>st</sup>	Collect All Progress Payments - Aug31st			\$ 1,220,000
Sep 10 <sup>th</sup>	Ship 3 <sup>rd</sup> deliverable - CLIN Price is	\$ 9,000,000		
	Lesser of:			
	-/- Liquidation @ 80%	\$ 7,200,000		
	-/- Unliquidated Progress Payments	\$ 6,520,000		
	<b>Total Invoice Amount</b>			<b>\$ 2,480,000</b>
Contract				
Recap	<b>Total Invoiced</b>	\$ 5,380,000		
	<b>Total Progress Payments Received</b>	\$ 14,620,000		
	<b>Total Collected</b>			<b>\$ 20,000,000</b>

## Progress Billing Extensions

To supplement existing functionality, various Oracle A&D customers have implemented client extensions to the standard Oracle e-Business Suite. These extensions use Oracle Project's client extension functionality previously described. Customers may modify the seeded extension templates supplied by Oracle to extend the functionality of the Oracle solution, and implement specific extensions to automate the progress payment billing process.

As previously discussed, Progress Payment Billing is a method of financing government contracts. It is fundamentally designed to reimburse contractors for a portion of their incurred costs prior to delivery of the goods or services being contracted for. SF1443 is the vehicle used to apply for progress payment.

Progress Payment billing extensions may perform queries, calculate amounts, and create billing events that support generation of the SF1443 Progress Payment Request billing form. Users may enter Estimate-at-Complete amount (EAC), Progress Payment Percentage, and Liquidation Percentage

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information in the solution. These values may then be used by the Progress Payment Billing extension to calculate the progress payment amount and generate the SF1443 form. The extensions can be assigned at either the project or top task level. The extension would typically be executed during the Generate Draft Invoice process. SF1443 forms may be generated either through Oracle Reports or Oracle partner MilPac, a leader in the government forms generation.

## Conclusions

A&D contractors must have systems that enable them to meet stringent U.S. Government requirements for accumulating and reporting costs for progress billings. Oracle Applications, including Oracle Projects, Oracle Project Contracts and Oracle Project Manufacturing provide A&D contractors the necessary tools to effectively manage contracts and submit progress billings timely and accurately. Using Oracle Projects and Oracle's partner MilPac, contractors can automate the capture of costs, the calculation of progress billing amounts, and the submittal of progress billings. By doing this, contractors can better control cash flow, lower processing costs, and tightly control and monitor financial performance on contracts.

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