



U.S. Department of Energy
Energy Efficiency and Renewable Energy

Bringing you a prosperous future where energy is clean, abundant, reliable, and affordable

Financing Utility Energy Services Projects



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UESC PROJECTS WORKSHOP

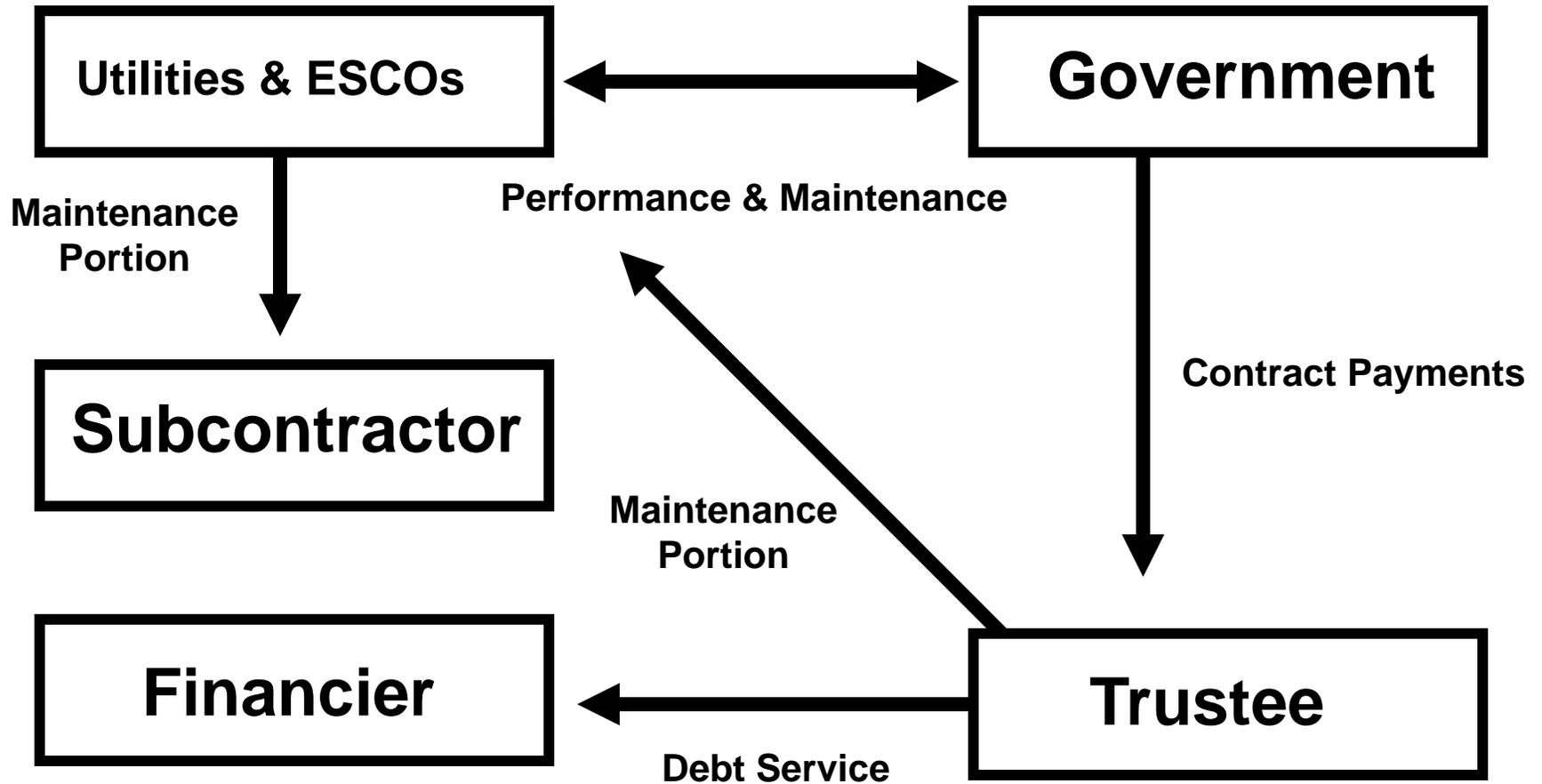


Role of Financial Institution

- ❖ Necessary in most projects
- ❖ Provides specialized construction & permanent financing
- ❖ Offers non-recourse financing
- ❖ Works with Prime Contractor (Utility) and the Agency
- ❖ Prepares documentation
- ❖ Terminology Website: www.investopedia.com

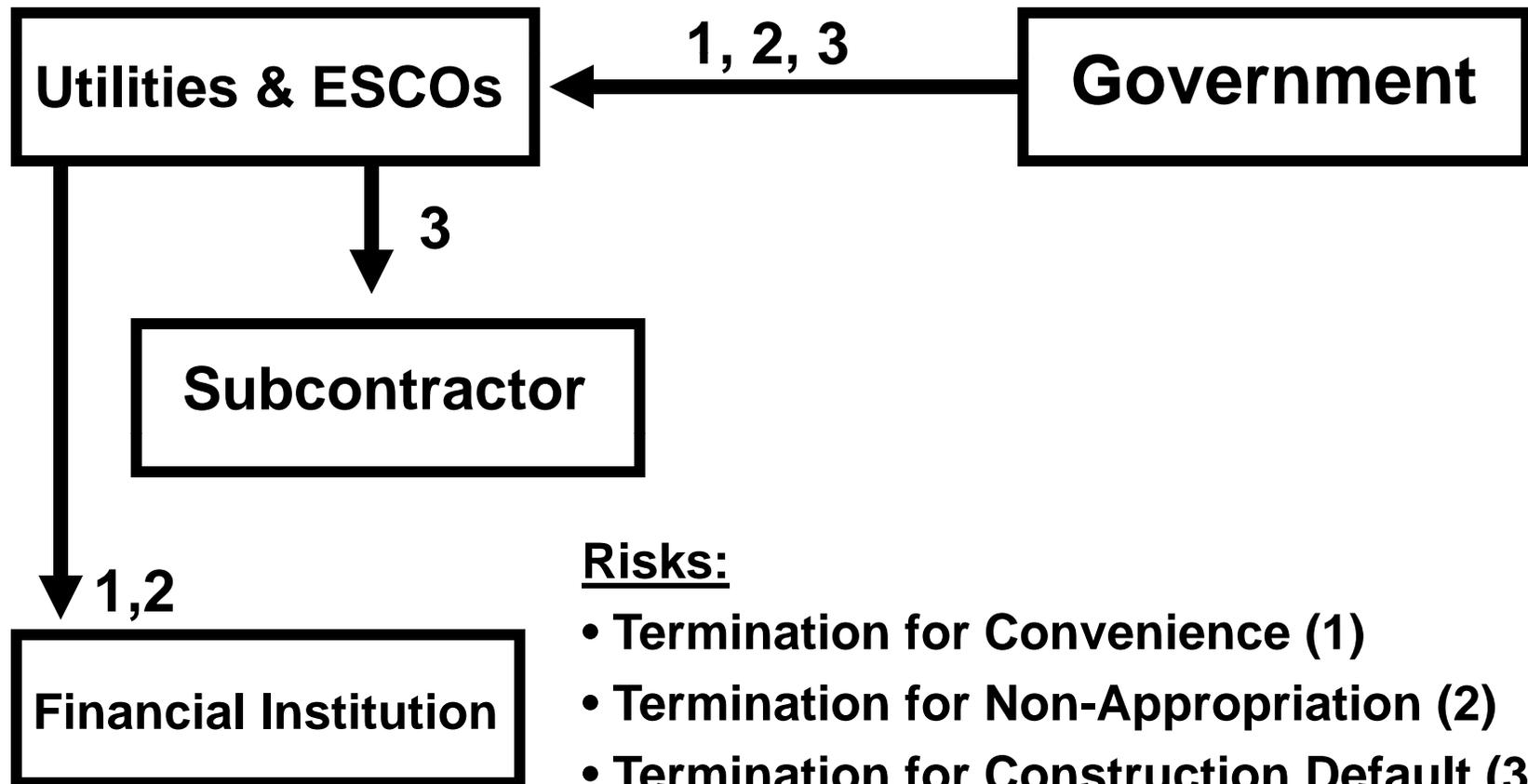


Financing Structure





Structure: Risk Assignment





- ❖ Project Construction -
 - Risk is reduced after acceptance
- ❖ Ongoing O&M and Energy Savings Guarantees
 - Financial Strength of ESCO or Utility
 - Other corporate guarantees/credit enhancements
 - Extent of Savings Guarantee
 - Project Economics and Technologies
 - Contractor Competency



How do Financiers Assess and Price Project Risks and Costs?

- ❖ Evaluate Strength of ESCO or Utility
- ❖ Evaluate Economics, Technologies and the Extent of the Energy Savings Guarantee
- ❖ Evaluate the Contract's Termination Language
 - Termination Schedule
- ❖ Size of Financing
- ❖ Term of Financing



Selecting Financing Solutions

- ❖ Most ESCO/utilities use financial institutions
- ❖ Select qualified prime contractors
- ❖ Talk to financial institutions
- ❖ Use agency resources in analysis
- ❖ Ask for alternative structures
- ❖ Be flexible on documentation
- ❖ Require strong letters of commitment
- ❖ Consider the financial risks



Why Interest Rates Vary

- ❖ **Performance Risk**
 - Project Construction
 - Energy Savings Guarantee
 - Ongoing O&M

- ❖ **Contract Administration**

- ❖ **Project Requirements**
 - Term and Size of Financing
 - Fixed or Variable Rates
 - Additional Financing Fees



Determining the Interest Rate

- ❖ Interest rate is determined by:
 - Base rate relative to market rate (Treasury Note or SWAP rate)
 - Increases for contract terms/risks (adder)
- ❖ Escrow accounts are the main type of financing structure used during construction
- ❖ Ultimately, pricing and terms are set by comparing a project's overall risk and return to similar projects in the private sector



Components of the Interest Rate

- ❖ **Base Rate**
 - Currently based on Treasury Note rate or SWAP rate for payment term and mode of the contract
 - The Treasury Note rate is less volatile

- ❖ **Spread**
 - Basis points (1/100% or .01%) added as a result of lender's perception of project's risk
 - Contributing elements include participant risk (utility/customer), project risk, market dynamics and contract risk (financed amount and term, payment mode and frequency, and other terms/conditions)



Total Interest Rate Example *

<u>Component</u>	<u>Treasury Note*</u>	<u>SWAP*</u>
10-Year Base Rate	3.68%	4.04%
Spread	<u>4.00%</u>	<u>3.75%</u>
Total	7.68%	7.79%

Websites for rates:

Treasury Rates:

(Historical): <http://www.federalreserve.gov/releases/h15/update/>

(Real-Time): <http://www.bloomberg.com/markets/rates/index.html>

SWAP Rates:

(Historical): <http://markets.ft.com/ft/markets/researchArchive.asp?report=ICAP>

*An Example Only Not Representative of Actual Rates



Escrow Financing Example

Escrow Project Financing Example

Monthly Draws

Assumptions

Interest Rate:	6.72%
Draw Total:	\$10,000,000
Capitalized Finance Charges:	\$552,577
Total Amount Financed:	\$10,552,577
Monthly Payments:	\$121,007
Payment Term (in months):	120
Total Annual Payments:	\$1,452,084
Total Payments:	\$14,520,840

Payment Mode Comparison

10 Annual-in-Advance Payments:	\$1,408,424
Total AIA Payments:	\$14,084,240
Total Payment Mode Savings:	\$436,600



Escrow Financing Example

Escrow Funding Monthly Draws

Interest Rate: 6.72%

Reinvestment Rate: 2.00%

Total Draws: \$10,000,000

Capitalized Finance Charges: \$552,577

Total Amount Financed: \$10,552,577

Month	Date	Percent	Total Draw Amount	Interest Income	Interest Expense	Escrow Balance
0	01-Jun-06	8.33%	\$833,333			\$9,719,243
1	01-Jul-06	8.33%	833,333	\$16,199	\$59,094	8,843,014
2	01-Aug-06	8.33%	833,333	14,738	59,094	7,965,325
3	01-Sep-06	8.33%	833,333	13,276	59,094	7,086,173
4	01-Oct-06	8.33%	833,333	11,810	59,094	6,205,555
5	01-Nov-06	8.33%	833,333	10,343	59,094	5,323,470
6	01-Dec-06	8.33%	833,333	8,872	59,094	4,439,915
7	01-Jan-07	8.33%	833,333	7,400	59,094	3,554,887
8	01-Feb-07	8.33%	833,333	5,925	59,094	2,668,384
9	01-Mar-07	8.33%	833,333	4,447	59,094	1,780,403
10	01-Apr-07	8.33%	833,333	2,967	59,094	890,943
11	01-May-07	8.33%	833,333	1,485	59,094	0
Totals		100%	\$10,000,000	\$97,462	\$650,039	



Escrow Financing Example

Escrow Project Financing Example

Quarterly Draws

Assumptions

Interest Rate:	6.72%
Draw Total:	\$10,000,000
Capitalized Finance Charges:	\$535,008
Total Amount Financed:	\$10,535,008
Monthly Payments:	\$120,806
Payment Term (in months):	120
Total Annual Payments:	\$1,449,672
Total Payments:	\$14,496,720

Payment Mode Comparison

10 Annual-in-Advance Payments:	\$1,406,079
Total AIA Payments:	\$14,060,790
Total Payment Mode Savings:	\$435,930



Escrow Financing Example

Escrow Funding Quarterly Draws

Interest Rate: 6.72%
 Reinvestment Rate: 2.00%
 Total Draws: \$10,000,000
 Capitalized Finance Charges: \$535,008
 Total Amount Financed: \$10,535,008

Month	Date	Percent	Total Draw Amount	Interest Income	Interest Expense	Escrow Balance
0	01-Jun-06	-	-			\$10,535,008
1	01-Jul-06	-	-	\$17,558	\$58,996	10,493,571
2	01-Aug-06	25.00%	\$2,500,000	17,489	58,996	7,952,064
3	01-Sep-06	-	-	13,253	58,996	7,906,321
4	01-Oct-06	-	-	13,177	58,996	7,860,503
5	01-Nov-06	25.00%	2,500,000	13,101	58,996	5,314,607
6	01-Dec-06	-	-	8,858	58,996	5,264,469
7	01-Jan-07	-	-	8,774	58,996	5,214,247
8	01-Feb-07	25.00%	2,500,000	8,690	58,996	2,663,941
9	01-Mar-07	-	-	4,440	58,996	2,609,385
10	01-Apr-07	-	-	4,349	58,996	2,554,738
11	01-May-07	25.00%	2,500,000	4,258	58,996	0
Totals		100.00%	\$10,000,000	\$113,948	\$648,957	



Interest Rate Summary Key Points

- ❖ Lenders price to the risks assumed
- ❖ Lenders' primary concern is on-time repayment of their investment
- ❖ Lenders make their return over time



How to Get the Lowest Interest Rates

- ❖ Bundle Projects
- ❖ Keep the Financing Term Under 15 Years
- ❖ Insure the Government Contract has Desirable Termination Language
- ❖ Fix Interest Rates at Time of Award
- ❖ Provide Limited or No Energy Savings Guarantees
- ❖ Work Only with Companies with the Very Highest Credit Ratings
- ❖ Don't Include Other Financing Fees in Rate



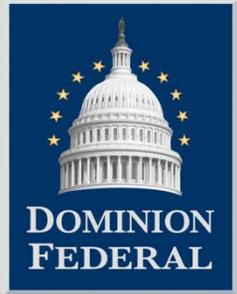
Current Market Conditions

- ❖ Credit is extremely tight (Supply vs. Demand)
- ❖ Credit spreads have widened
- ❖ Traditional market economics are not in place
- ❖ Markets are erratic
- ❖ Transaction scrutiny increased
- ❖ Hoping for stabilization in 2009



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