



An Energy Efficiency Workshop & Exposition
Palm Springs, California

*Numbers Game - Getting the Best Terms and
Conditions*

**Why Pre-Payments Matter and
What Should Be Done About
Them**

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*Why Prepayments Matter and What Should
Be Done About Them*

- Types of Prepayments
- Why Prepayments Matter to Investors
- The Problem with the Mortgage Analogy
- Three Methods for Handling Prepayments
- Recommendation



Three Types of Prepayments

- **Changes in scope, particularly eliminations of ECMs**
 - Not the focus of this presentation
 - Very expensive to fix, but not much can be done except do the best possible job on the front end scoping the project
- **Terminations for Convenience**
 - In part or in whole
 - True T for C is fairly uncommon and an acceptable risk
 - BPA type re-financings will be punished by the market
- **Prepayments of Excess O&M funds**
 - Can come at any time, in any amount
 - A problem for all of us in this room

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Why Prepayments Matter –

Government Perspective

- The government sees prepayments as a way to use excess funds, thereby not losing the funds in an appropriation cycle, and as a means to shorten the term.
- It generally seems like a “good thing to do”, much like paying a bit more on your mortgage.
- How can this be a bad thing?

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Why Prepayments Matter – Investor Perspective

- When investors invest in an ESPC or DSM contract, we have to assume it will go to term because the cash flows from the investment are match funded to a liability of equal term.
- When the asset goes away (or is reduced) due to pre-payments, the liability stays the same creating a real loss for the investor if interest rates have fallen.
- As a result, virtually all debt securities, including Treasuries, are either non-callable or have a make-whole provision, that protects the investor from losses due to early pre-payments.

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Why Prepayments Matter – Investor Perspective (cont.)

- **Example:** Assume a 20 year \$10 million ESPC contract, priced at 8% that suffers a \$1m pre-payment at the end of year 1. Assume rates fall to 7.75% after funding
 - Scheduled Payment: \$83,644/mo for **240** months
 - Actual Payment: \$83,644/mo for **194** months
 - Scheduled PV of Interest: \$5.952 million
 - Actual PV of Interest: \$5.26 million
 - **Economic loss to Investor: \$.726 million (12%)**

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*Why Prepayments Matter –
The Problem with the Mortgage Analogy?*

- **How is this pre-payment risk worse than that faced by investors in mortgage backed securities?**
 - Residential MBS securities do not have pre-payment penalties, which is why we can all pay a little extra every month;
 - Instead, MBS pools have detailed statistical models, based on **hundreds of thousands** of mortgages to estimate the expected life of the pool
 - Factors include: location , level of interest rates, age of loans etc.
 - Investors match fund the assets against what the expected duration is, not the term. Example: 7 years duration vs 30 year term.
 - Price is higher for the right to prepay.

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*Why Prepayments Matter –
The Problem with the Mortgage Analogy?*

- **In ESPC and Areawide contracts, none of these conditions exist:**
 - 10's of transactions, not 100's of thousands
 - Pre-payment is not highly correlated with interest rate movements, but appropriation events, which appear random to investors
 - Most deals go to term, so investors have to plan on them going to term. But then we lose money when they don't. Mortgages rarely go to term.

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Three Options for Handling Pre-payments

- **Option 1: Continue as we are.**
 - Many investors will not participate in this market due to the pre-payment risk.
 - If pre-payments expand, some current investors will simply leave the market.

- **Option 2: Make-Whole Penalty**
 - This is the traditional financial solution.
 - Can result in high penalties if rates have fallen far.
 - Not an easy contractual term for the government to accept

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Three Options for Handling Pre-payments

- **Option 3: Reinvest Proceeds:**
 - Permit Pre-payments, but invest the amounts in order to pay off the end of the term.
 - This approach was reviewed in the [FEMP Utility Energy Services Contracts -Lessons Learned](#) booklet;
 - It is designed to achieve the two primary goals of the government when it prepays:
 - Use up existing appropriated dollars when available
 - Shorten the term of the government's obligation
 - By using the funds to pay the last payments, investors are held harmless.

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Three Options for Handling Pre-payments

Option 3: Example: Assume a 20 year \$10 million ESPC contract, priced at 8% that suffers a \$1m pre-payment at the end of year 1. Assume rates fall to 7.75% after funding

- > Scheduled Payment: \$83,644/mo for **240** months
- > Actual Payment: \$83,644/mo for **204** months
- > Total Savings to Government: \$3,011,184
- > Actual Payment to Investor: \$83,644/mo for **240** months
- > **Economic loss to Investor: \$0.00 (0%)**

Government Objectives

- Use Excess Funds
- Shorten the Term

Investor Objectives

- No Economic Loss
- No Change to Term



Recommendation

- **Option 3: Reinvest Proceeds** provides a fair alternative to the present practice of random pre-payments which harm investors in ESPC and DSM transactions.
- Both the government's and investor's primary objectives are met.
- Neither side gets all that it wants:
 - > The government will not benefit fully from immediate principal pay-downs
 - > Investors will have additional administrative expense