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The Folly of Consequence-free Budget Scoring

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by

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The Folly of Consequence-free Budget Scoring

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HA Advisory Services advises government and corporate clients on how to use multiyear Federal funding to acquire critical infrastructure needs. HA Advisory Services is an affiliate of Hannon Armstrong Capital, which for over 25 years has provided financing for government infrastructure projects.

Things and actions are what they are, and the consequences of them will be what they will be; why, then, should we desire to be deceived?

*Bishop Joseph Butler
1692-1752*

Overview

Current Congressional Budget Office (CBO) budget scoring rules cheat taxpayers and warfighters by ignoring the high cost of not acquiring cost-effective upgrades to critical combat weapons. Treating paid-over-time procurements as if they are paid-up-front budget outlays necessarily perpetuates waste and inefficiency where we can least afford it: on the modern battlefield. As a result, the current acquisition process for such upgrades involves a simplistic, two-step process. First, determine if paying the entire cost up-front of an upgrade is less expensive than the net present value of paying for the upgrade over time. Once paying up-front is “discovered” to be the cheaper option (as nearly always occurs), the next step is to abandon the upgrade as soon as it fails to compete successfully for scarce procurement budget dollars. An extremely conscientious program official may repeat this process for a number of budget cycles. But in the end, the outcome is predictable. The game is just rigged that way.

The problem is that these policies have real consequences that squander taxpayer dollars while degrading battlefield performance. Many of America’s major combat weapons systems have engines that are so old and obsolete that modern upgrades would easily pay for themselves in fuel and maintenance savings while dramatically increasing combat range and battlefield reliability. The private sector is willing to give the DoD such upgrades at no upfront cost in exchange for annual “mortgage-like” payments that are never greater than verified savings in fuel and maintenance. How can we know this? Because the DoD has routinely used such “paid-from-savings” contracts for over a decade to upgrade infrastructure on military bases. Similar contracts are widely used by the DoD to acquire vast amounts of information technology and telecommunication assets.

But when legislation was introduced in Congress to extend paid-from-savings contracts to combat platforms, the CBO “scored” the legislation so high that it effectively killed the legislative effort. The CBO insists that paid-over-time acquisitions should “score” for budget purposes in the same manner as if an outright purchase was made—even if the payments-over-time are limited by law to the verified savings produced by the acquisition. By counting the



payments and ignoring the savings as “speculative,” the CBO ensures wasteful outcomes; the more an upgrade saves, the more the CBO will assert it costs.

The CBO claims that accounting for acquisitions in any other manner is inconsistent with the *Budget Act* of 1967. The fact is that that Act and all Federal budget laws are silent on this issue. The CBO’s position is really a hunch—no more than one interpretation of general principles. The CBO’s counterpart in the Executive Branch, the Office of Management and Budget (OMB), reaches the opposite conclusion.

The CBO views its scoring policy in a consequence-free vacuum and sees its role as a dispassionate arbiter of how to apply general budget principles to specific legislation. Actual outcomes are seen as irrelevant—or, at the very least, as highly speculative and, therefore, properly dismissed.

Supporting this dysfunctional acquisition system is an almost smug attitude among many defense acquisition policy apparatchiks. Unfortunately, military and civilian officials who should be fierce advocates for warfighters on such policy issues are missing in action on this issue. Since the Boeing tanker lease scandal, anyone who challenges the orthodoxy of traditional defense procurement is considered, at best, politically tone-deaf.

Government accounting procedures should serve the mission of the government—not vice-versa. If the National defense mission of the Federal government is important enough to siphon off wealth from citizens in the form of taxes, the first rule should be that every tax dollar must buy the most combat power possible. Budget rules that frustrate this purpose need to be changed.

Why Inefficiency Matters on Combat Platforms

The President’s 2006 State of the Union address should resonate in many quarters, including in the President’s own Executive Branch. Nowhere is the “addiction to oil” that the President cited more serious than in the Federal government, which enjoys the distinction of being the largest single consumer of energy in the world. Within the Federal government, the Department of Defense leads all agencies in consumption of oil. This is not surprising, considering the vast arsenal of tanks, ships, aircraft and bases that the DoD uses in its critical warfighting operations.

What is surprising, however, is how brave Americans are sent into battle with obsolete oil-consuming systems that would be cheaper to replace with state-of-the-art upgrades. Some of our most famous aircraft and other weapons systems are long overdue for new engines since their forty-year-old engines are underpowered and undependable—and waste billions of taxpayer dollars on fuel.

Breaking any addiction requires that one first admit there is a problem. As taxpayers, we have a problem with Federal accounting rules that are rigged to waste our tax dollars. As for warfighters, their problem is that these same policies send them into battle with second-rate equipment. But all of us have a common problem: Federal accountants clearly could not care less about these outcomes; their attitude is simple: *It’s not my department.*

Since the American Revolution, how the government buys military goods and services been a source of constant concern—and with good reason. Failing to get the most for each taxpayer dollars is always bad, but it is hard to imagine a greater abomination than when



American warfighters are sent into battle with second-rate equipment when first-rate equipment could be bought at less cost. Historically, war profiteers and corrupt bureaucrats are the usual suspects, but here the culprits are myopic budget officials.

Most Americans would be surprised to learn that some of our best-known weapons are grossly underpowered by forty-year-old engines that cheat warfighters of combat range and power while cheating taxpayers by guzzling gas and requiring ever-increasing amounts of maintenance. Reengining with state-of-the-art engines could give warfighters the best “bang for the buck” while taxpayers would harvest a windfall in savings. The savings are so great and so certain that the private sector has offered the DoD a compelling offer: Let us give you the new engines, and you can pay us back from the savings—but only if and when those savings materialize.

The DoD routinely accepts such offers when the stakes are low, such as upgrading energy systems on military bases. Congress created *Energy Savings Performance Contracts* in the 1990s for exactly this purpose. Since then, billions of taxpayer dollars have been saved using these “paid-from-savings-over-time” contracts. The advantage is not just a matter of making defense contractors guarantee savings. The real advantage is that these contracts break the cycle in which aging engines rarely compete successfully for full, up-front funding in the Federal budget process.

That cycle is, after all, how these assets got to be old and obsolete in the first place. Nevertheless, many OMB and CBO budget officials fail to see this is a problem, despite it being documented in numerous DoD and Air Force studies and reports to Congress. The accountants remain fixed in their belief that if replacing obsolete engines was important enough, the DoD’s limited capital budget would be allocated to that purpose. These same accountants are not bothered that the other major part of the defense spending, the “operations and maintenance” budget, is being drained by these gas-guzzling maintenance hogs year-in and year-out—even when offered a paid-from-savings solution that pays for the new engines out of savings from existing operations and maintenance budget levels. *Tough luck, soldier*, is their bottom line.

Of course, buying anything over time is more expensive than paying cash up-front. But as long as there is a National Debt, even capital appropriations from Congress cost the taxpayers interest. Thus, the issue is really how much *more* interest does an Energy Savings Performance contract cost the taxpayers, and what do the taxpayers get for that extra cost? Moreover, the real world choice is not just between buying outright or buying over time. The third—and most often selected—choice is simply to do nothing.

Unfortunately, doing nothing can be the worst choice of all. This is exactly what is occurring in a surprising number of combat fleets, from Abrams tanks to B-52 Bombers. To be clear, a legacy tank, aircraft or ship itself may still have decades of useful life. After all, it’s hard to wear out a tank. And until some new enemy advances Panzer-technology, the Abrams tank is unlikely to meet its match on a battlefield anytime soon. The same goes for B-52 and the Joint STARS aircraft fleets—and any number of other legacy fleets.

But technology advances at different rates in different areas. So, while these ships, tanks and aircraft may still be perfectly suited for battle, their engines often are not. Engine technology has advanced so profoundly in the last few decades that state-of-the-art engines can quickly pay for themselves in fuel and maintenance savings—and do this while providing greater power, combat range and battlefield reliability. A recent Air Force study estimated that reengining the B-52 fleet alone would pay for itself in less than half of the remaining life of the



airframe, extend combat range by 30% and save so much fuel that even in peacetime, it would be equivalent to taking over 144,000 cars off the road each year.

None of this is disputed by the DoD, Congress or the White House. So, why are we still sending brave Americans into battle with obsolete equipment that costs taxpayers more than state-of-the-art alternatives? The reason is simple: Federal accountants are blocking combat upgrades that save money and lives because their accounting rules are based on bad logic.

Just as with energy system upgrades on military bases, there are generally three choices with obsolete engines. First, you can buy the upgrade outright, assuming that reengining B-52s, Joint STARS or Abrams tanks can compete for scarce capital appropriations. Second, you can buy the upgrade over time, matching payments with the savings produced by the upgrade, thereby spending no more in any given year than would have otherwise been spent. Third, you can do nothing.

Again, no one disputes these alternatives. In fact, a recent DoD study submitted to Congress even identified the lifecycle costs for each of these three alternatives for replacing the forty-year-old engines on one of America's most successful combat aircraft: Joint STARS:

Option A: Outright Purchase: \$ 1.0 Billion

Option B: Purchase Over Time: \$ 1.2 Billion

Option C: Do Nothing: \$ 1.5 Billion

Any reasonable person would quickly understand that Option A is the best choice. And if for some reason Option A is not possible, Option B is the next best alternative. Clearly, Option C is the worst choice.

But when viewed through the prism of Federal budget policy, the logic gets twisted in this way: Because Option B costs more than Option A, Option B must be eliminated from any further consideration. So the choice is between Option A and Option C. But history shows Option A is not a realistic possibility, since the DoD usually has more urgent priorities than replacing engines that, after all, still work. So Option C is the end result.

Privately, everyone agrees that Option A is not likely to happen. Like a frog in boiling water, Federal decision-makers never really feel the pain of creeping obsolescence in weapons systems. As a result, even the most economically sound upgrades rarely compete successfully for budget dollars against higher priorities. Nor is this necessarily a bad decision. Imagine having to choose between upgrading Humvees with either new armor against roadside bombs or a new engine. New armor will save lives right away, so it should (and does) get priority.

This example is representative of the difficult choices made every day. The point is that even if we assume that DoD and Congress sort out these priorities properly, shouldn't Option B at least remain on the table for consideration? If "paid-from-savings" contracts are a legitimate tool for upgrading the rear echelon, why shouldn't the tool be available on the front line?

Several years ago, a bipartisan group of Senators and Congressmen ranging from Senators Sue Collins to Pat Roberts to Hillary Clinton introduced legislation that would allow the DoD to use Energy Savings Performance Contracts to upgrade combat aircraft, ships and vehicles. This was a bill (S. 2318 / H.R. 3339) that appealed to hawks, environmentalists and



anti-government waste advocates equally. There was no apparent opposition until the CBO and OMB accountants successfully killed the effort.

The CBO asserted that Energy Saving Performance Contracts outlays are real, but their savings are speculative—even though they are, by law, a mathematical identity. The House Energy Committee Chairman, Joe Barton, called the CBO's reasoning "absurd," and Senate Energy Committee Chairman (and former Budget Committee Chairman) Pete Domenici stated: "CBO views these contracts as outlays by the federal government. The truth is that these contracts cost the government nothing."

But because of the CBO, Congress was barely able to muster the votes to reauthorize these contracts for use in upgrading military buildings, gagging down a \$2.8 billion "score" from the CBO. Tragically for our warfighters and taxpayers, the CBO's Alice-in-Wonderland accounting estimated an expansion of these contracts for use on combat systems at about \$15 billion. This "cost" was too much for anyone to ignore, but not enough for anyone to engage in a political firefight with the CBO. So, the *Energy Act of 2005* was passed with Energy Savings Performance Contracts for military buildings fully reauthorized, but nothing authorized for battlefield assets.

The great irony is that the CBO's scoring policy makes it painful to save a little taxpayer money and impossible to save a lot.

Contributing to and applauding this perverse outcome is the OMB, the accountants for the Executive Branch, including the DoD. To their credit, the OMB believes that Energy Savings Performance Contracts cost the government nothing. But the OMB went out of its way to disparage using this proven tool to upgrade combat systems. The reason? Only that, "it is inconsistent with Federal fiscal and procurement policies." No kidding...

In a less dangerous world, wasting defense dollars by equipping our warfighters with second-rate equipment that costs more than first-rate alternatives would simply be irrational. But for the foreseeable future, irrational budget policies will continue to have very real and dangerous consequences for the brave Americans we send into battle.

Warfighters deserve more respect than these accountants give them. And the Bush Administration and Congress should get serious about where their priorities are: with the taxpayers and warfighters, or with the accountants.

Background

The original statute creating Energy Savings Performance Contracts (ESPCs) was the *Energy Policy Act of 1992*, Public Law 102-486, enacted October 24, 1992, codified at 42 USC 8287. The CBO scored the ESPC provisions of the *Energy Policy Act of 1992* at zero.

The sunset date of the original statute was amended to become October 1, 2003, by the *Energy Conservation Reauthorization Act of 1998* (Public Law 105-388, enacted November 13, 1998). Again, the CBO scored the ESPC provisions of the *Energy Conservation Reauthorization Act of 1998* at zero.

The CBO reversed this decade-old policy of scoring ESPCs at zero on April 7, 2003 in their Cost Estimate for H.R. 1346, in which the CBO stated:



Currently, federal agencies can enter into an ESPC, a specific type of long-term contract, for the purchase of energy efficiency equipment, such as new windows and lighting. Using such equipment can reduce the energy costs for a facility. When using an ESPC, the savings from reduced energy bills are used to pay for the purchase of the new equipment over several years. The commitment to make such payments is made when the ESPC is entered into. Thus, consistent with governmentwide accounting principles, CBO believes that the budget should reflect that commitment as new obligations at the time that an ESPC is signed. Currently, agencies can use ESPCs to purchase new equipment over a 25-year period without an appropriation for the full amount of the purchase price.

DOE estimates that agencies entered into ESPCs valued over \$800 million since 1988. CBO estimates that, because the federal building inventory is aging, those contracts would continue to be used over time at roughly the same rate currently used, or \$75 million in 2004 and increasing after that. Thus, we estimate that extending the authorization for ESPCs would increase direct spending by about \$64 million in 2004 and \$1.1 billion over the 2004-2013 period.

This Cost Estimate was prepared by Lisa Cash Driskill and approved by Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

The following day, on April 8, 2003, the CBO published their Cost Estimate for H.R. 6, which states:

Energy Savings Performance Contracts (ESPCs). Section 11006 of H.R. 6 would provide permanent authorization to use ESPCs and would expand their use. The expansion would allow agencies to use an ESPC to construct replacement buildings by committing to pay private contractors a portion of the budget savings expected from reduced operations, maintenance, and energy costs at such new buildings. CBO estimates that this provision would cost \$75 million in 2004, \$879 million over the 2004-2008 period, and \$2.8 billion over the next 10 years.

Again, this section of the Cost Estimate for H.R. 6 was prepared by Lisa Cash Driskill and approved by Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

In sum, the CBO recognized that ESPCs cost the government nothing and scored ESPC authorization and reauthorization at zero in 1992 and 1998, respectively. In 2003, with no meaningful explanation, CBO reversed this policy and scored ESPCs as direct spending.

For its part, the Office of Management and Budget (OMB) rejects the CBO's new ESPC scoring policy and continues to score ESPCs as budget-neutral except for termination liability, which is scored only if and when such termination actually occurs. This OMB policy is set forth in the July 25, 1998, OMB memorandum *Federal Use of Energy Savings Performance Contracting* (Retrieved from <http://www.whitehouse.gov/omb/memoranda/m98-13.pdf>).

This policy, originally established in the Clinton Administration, was reaffirmed as the policy of the Bush Administration by the Secretary of Energy in letters to the Chairmen of the House and Senate Energy Committees, dated April 8, 2004, in which Secretary Abraham states:



The legislation itself extending ESPC authority is considered budget neutral and does not require additional resources, as the Office of Management and Budget classifies all budget authority and outlays for ESPCs as absorbing discretionary resources. However, ESPCs actually save the government money, because the upfront costs of ESPC efficiency improvements are recovered through the energy savings that result. Moreover, payments to the contractors are contingent upon realizing a guaranteed stream of future cost savings.

Improved energy efficiency and conservation at Federal facilities is an important component of this Administration's commitment to the cost-effective use of public dollars and protection of the environment. The Administration urges Congress to act quickly to the authorization of this important program.

Thus, the consistent position of the Executive Branch through both the Clinton and current Bush Administrations is that ESPCs should be scored at zero. The reasoning for this is compelling since, contrary to CBO's claim that the government's "commitment to make such payments is made when the ESPC is entered into," the government's commitment to make payments under an ESPC only is made when, and to the extent, savings are achieved in each year of the ESPC. This is set forth explicitly in 42 USC 8287 (B), which states:

Aggregate annual payments by an agency to both utilities and energy savings performance contractors, under an energy savings performance contract, may not exceed the amount that the agency would have paid for utilities without an energy savings performance contract (as estimated through the procedures developed pursuant to this section) during contract years.

Thus, contrary to the CBO's assertion that its new ESPC scoring policy is, "consistent with governmentwide accounting principles," no other entity within the federal government has ever accepted the CBO's policy. Just the opposite is true: Not scoring ESPC payments is, and always has been, the governmentwide accounting principle.

Economic Logic Compels ESPCs Scoring at Zero

The fundamental economic basis for not scoring ESPCs is that the opportunity cost of an ESPC (i.e., the government's next best alternative to the ESPC) is to continue to pay (what by law must be) a higher amount for ongoing energy and maintenance costs on the aging infrastructure that the ESPC would upgrade.

The fact that ESPCs must reduce pre-existing government obligations makes ESPCs unique among all financing vehicles available to the government. Scoring ESPC payments without deducting the higher payments the government would otherwise make results in double counting of the true scope of the government obligation.

Put another way, if a government obligation of \$100 is replaced with a lesser government obligation of \$90, the correct scoring is not \$190. While one could argue that the proper score in this case is \$90, proponents of ESPCs only ask that the more conservative amount of \$100 be recognized as a complete offset to the original \$100.



The fact is that using an ESPC cannot increase Federal obligations. At worst, the Federal obligation remains at the same level it would have been if no ESPC were used. It is this worst-case scenario that produces a zero score in any rational budget treatment.

Accounting Logic Compels ESPCs Scoring at Zero

Recognizing that accounting principles sometimes differ from their underlying economic theory, it is worth reviewing ESPC scoring through a purely accounting prism. In the most general sense, Federal accounting divides Federal spending into Operations & Maintenance (O&M) accounts and Capital accounts. In a classic Federal acquisition, an upgrade is purchased by an agency using Capital appropriations provided for that specific purpose by Congress, almost always without any statutory offset requirements. In such a case, the entire amount of that Capital appropriation is properly scored as direct spending. Linking this to its underlying economic justification, it can be said that Congress could spend that appropriation on anything else; thus, its opportunity cost is the full amount of the Capital appropriation.

An ESPC is fundamentally different from such a classic Federal acquisition, precisely because it only draws on the existing stream of the applicable O&M account over the term of the ESPC. The key factor that compels a zero-score accounting treatment is that the ESPC cannot ever draw more from that O&M account than would have been drawn if the ESPC had not been executed. Moreover, the ESPC can never create Federal obligations from any Capital account. Again, linking this to its underlying economic justification, Congress could not spend that portion of the O&M account appropriation on anything else, since it would be spent on fuel and maintenance for the aging asset in the absence of an ESPC; thus, the opportunity cost of an ESPC is spending the same (or greater) amount of O&M appropriation.

In sum, unless there is a contract termination, ESPCs cannot ever lead to an increase in the amount of money that Congress would have otherwise appropriated for any O&M or Capital account.

To be clear, termination of an ESPC can trigger a Federal obligation that would exceed the normal O&M account funding stream. Congress recognized this when it created ESPCs in 1992 and explicitly set forth how such an event should be scored. This provision, codified in 42 USC 8287, states:

1. *A Federal agency may enter into a multiyear contract under this subchapter for a period not to exceed 25 years, without funding of cancellation charges before cancellation, if—*
 - (i) such contract was awarded in a competitive manner pursuant to subsection (b)(2) of this section, using procedures and methods established under this subchapter;*
 - (ii) funds are available and adequate for payment of the costs of such contract for the first fiscal year;*
 - (iii) 30 days before the award of any such contract that contains a clause setting forth a cancellation ceiling in excess of \$10,000,000, the head of such agency gives written notification of such proposed contract and of the proposed cancellation ceiling for such contract to the appropriate authorizing and appropriating committees of the Congress; and*



(iv) such contract is governed by part 17.1 of the Federal Acquisition Regulation promulgated under section 421 of title 41 or the applicable rules promulgated under this subchapter.

Thus, the proper accounting treatment to provide for possible termination is not a matter for debate or interpretation; it is explicitly established by Congress in Federal law. To the extent that the CBO justifies its radical scoring of ESPCs by citing termination liability exposure, it is contrary to the consensus of Congress expressed in this statute.

Moreover, this law makes tremendous sense and reaches the proper economic result. Accounting for termination costs is clearly appropriate when a termination occurs. But since no one knows the future with certainty, the termination liability amount should be discounted by the likelihood of a termination actually occurring. Historical data shows that less than 1% of all Federal contracts are terminated, either for government convenience or contractor default. Twelve years of experience shows that ESPCs' rate of termination is much better than these government-wide averages.

What Does It Matter?

This CBO scoring policy has a tremendously adverse impact and is against Federal Government interests. Simply put, this CBO scoring policy undermines the original purpose for which Congress intended ESPCs, which is to permit agencies to introduce rational economic upgrades that permanently reduce net costs to the taxpayer.

This CBO scoring policy further undermines the beneficial expansion of ESPCs to the non-installation applications, as was provided for in H.R. 3339 and S. 2318. These upgrades to combat aircraft, tanks and ships are where the majority of benefits to the Federal government would accrue. Because ESPCs in this application also increase the combat range and reliability of military forces, the adverse impact of this CBO policy will result in American forces being sent into battle with less than the best available weapons and support systems *per dollar spent*.

While a healthy debate can always be made on what is the right level of military spending, it is unconscionable that once that level is set, we do not provide our warfighters the most powerful capability that this amount of money can buy.

In a Perfect World

While the immediate solution would be to reverse the CBO's scoring policy on paid-from-savings contracting, there is a more proactive approach that should be considered. The best solution is to adopt more responsible policy along the following lines:

- a. The overall acquisition process should result in the compilation and maintenance of a list of acquisitions that make economic and operational sense, using rational and intellectually honest lifecycle cost-benefit analysis.
- b. Pay for as many of these acquisitions as possible with the limited capital appropriations available each year. Regardless of how the projects are prioritized (economic priorities will often lose out to political, strategic and tactical priorities), at the end of the process there will be unfunded but worthy acquisitions.
- c. For each unfunded but desired acquisition, determine if the potential cost of the acquisition would be offset by a corresponding savings generated by the acquisition.



- d. In cases where such an offset is sufficient to cover a multi-year amortization of the acquisition, Federal agencies should be encouraged to use multi-year contracting authority to match the rate of new spending for the upgrade to the rate of new savings generated by the upgrade.
- e. Require agencies to consider total savings to the US Treasury, not just savings in their corner of the Federal government. Rational accounting rules for a national government should not encourage tribalism.

Finally, it should be recognized that some upgrades do eventually get funded through the traditional acquisition process. Defenders of the status quo are quick to point to these examples as evidence that the traditional system works. The flaw in this logic is that years of potential savings are lost forever while upgrades wait in line for full funding. The net effect of this folly is that taxpayers and warfighters are cheated for the sake of blind obedience to a bureaucratic system that serves no one but itself.



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The Folly of Consequence-Free Budget Scoring



Folly

- Main Entry: **fol·ly**
- Pronunciation: 'fä-IE
- Function: *noun*
- Inflected Form(s): *plural follies*
- Etymology: Middle English *folie*, from Anglo-French, from *fol* fool

- 1 : lack of good sense or normal prudence and foresight

- 2 a : criminally or tragically foolish actions or conduct b *obsolete* : EVIL, WICKEDNESS; *especially* : lewd behavior

- 3 : a foolish act or idea

- 4 : an excessively costly or unprofitable undertaking...

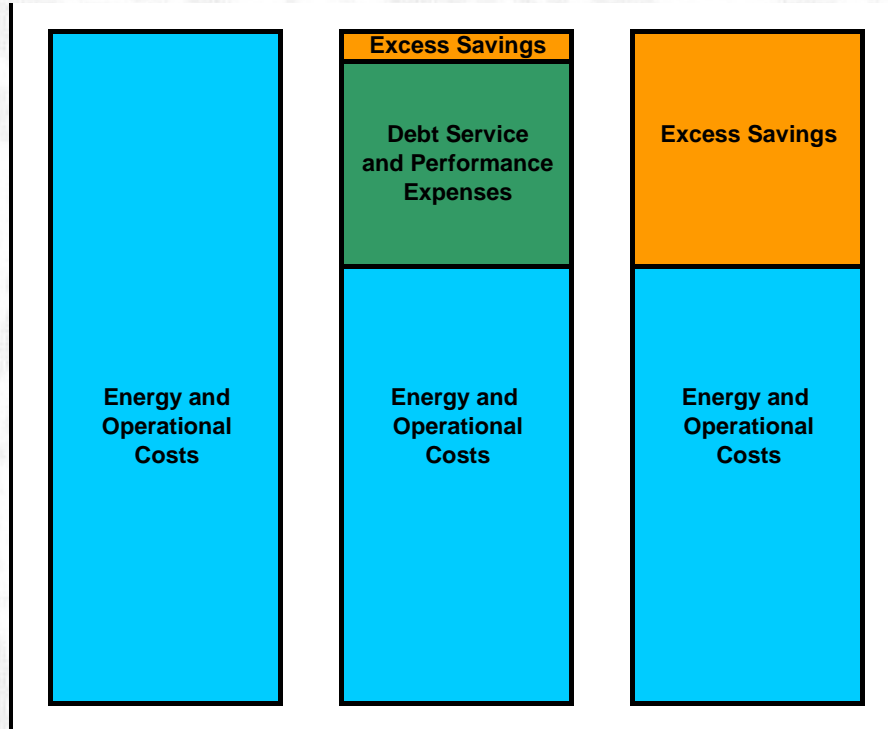
- From Merriam-Webster Online Dictionary www.m-w.com/dictionary/folly

“The Big Idea”

Before

During

After



- A contractor will make capital upgrades and savings are produced;
- Those savings are used to pay debt service on the capital portion, along with performance expenses for the term of the contract;
- During the term of the contract, a small portion of produced savings are retained by the Agency (optional); and,
- Once the debt service is satisfied and the contract term expires, the Agency retains 100% of the savings produced.

What's in it for me?

For Government agencies:

Paid-over-time solutions bridge the gap between what Federal agencies need and what they can acquire from current appropriations. If done properly, these solutions leverage future year appropriations without violating the Anti-Deficiency Act and shift contract risks to the private sector.

For Prime Contractors:

Paid-over-time solutions create sales opportunities that would otherwise not exist. If done properly, third party financing can accelerate revenue recognition under applicable accounting rules (FAS 140 / SOP 97-2).

For Taxpayers & Warfighters:

Maximizes “bang for the buck.”



The U.S. Federal Government is the largest purchaser of goods and services in the world. While a large portion of the Federal Government's annual procurement is acquired outright from current appropriations, the remainder is purchased over time via service contracts, performance contracts, operating and capital leases and installment sales agreements.

Illustrative Example

Paid Over Time contracts can convert future year operating dollars into today's capital upgrade.

Example --

	2005	2006	2007	2008	2009
Current O&M Budget:	\$5.0M	\$5.0M	\$5.0M	\$5.0M	\$5.0M
Payments Over Time: \$4.5M	\$4.5M	\$4.5M	\$4.5M	\$4.5M	
PV = System Cost:	\$22.0M	←—————			
Agency Savings:	\$0.5M	\$0.5M	\$0.5M	\$0.5M	\$0.5M

Vendor makes a \$22.0M sale despite the agency having only \$5.0M in annual appropriations

Agency receives the benefit of a \$22.0M system acquisition with no upfront investment.



Historical Uses of Paid-Over-Time Federal Contracts

**Only Certain Asset Classes are Procured This
Way:**

- Information Technology
- Telecommunications
- Energy Infrastructure
- Real Property



Hannon Armstrong financed the DOD's Telecommunications Modernization Program, principally located in the Pentagon.. "TEMPO" was one of the largest telecommunications transactions ever completed for the Federal Government and involved funding takedowns over a five-year period.

Types of Contracts:

- Software Licenses
- Service Contracts
- Energy Savings Performance Contracts (ESPCs)
- Utility Energy Service Contracts (UESCs)
- Enhanced Use Leases (EULs)
- Public Private Ventures (PPVs)
- Inter-Agency Agreements (IAAs)

The Second “Big Idea”

The traditional model is that the government buys goods and services...



... and produces services to society.

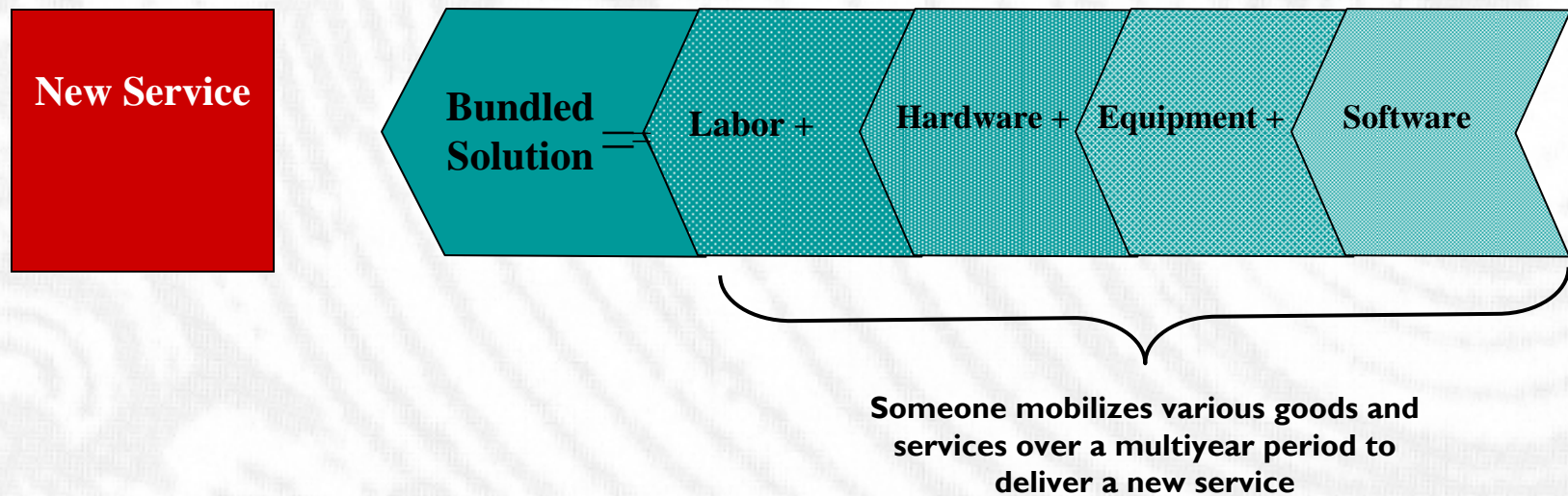
The Second “Big Idea”

The modern trend is that the government buys services...



... and produces services to society.

It is all a question of who is more efficient at bundling goods and services: The Federal Government or the Private Sector?



Example: Federal Service contracts where performance requires an upfront investment in Labor, Hardware, Software and/or Equipment.

The Future: Combat Assets

Paid over Time Contracts have traditionally been used to harness efficiency advances in technology for buildings and related administrative systems.

The same principles apply in combat system applications, plus two additional benefits:

Greater Combat Range



Less Logistical “Tail”



Combat System Applications

The Major Opportunities



DOD Overview



Defense Science Board

Defense Science Board Task Force on Improving Fuel Efficiency of Weapons Platforms' Report on *More Capable Warfighting through Reduced Fuel Burn*, dated January 2001, lists 16 economically-justified upgrades, including:

Army Abrams Tank APU

Army Abrams Tank Reengining

Army OH-58D, AH-64, UH-60, CH47D helicopters (IHPTET).

Navy "Hotel Load" Gas Turbine Upgrades

Navy Diesel Powerplant Improvements (Fuel Injection)

Air Force B-52 Reengining

Air Force Advanced Computer Flight Plan Program

Air Force Aircraft Communications Addressing and Reporting System

Air Force Worldwide Aeronautical Route Planner

Air Force Information for Global Reach



B-52 Reengining

Two Studies

- Defense Science Board Task Force on B-52H Re-Engining, June 2004



- Air Force / Boeing Feasibility Study, September 2003



B-52 Reengining



Defense Science Board Task Force on B-52H Re-Engining Recommends:

- “B-52H re-engining represents low technical risk.”
- “B-52H re-engining provides greater operational flexibility and range, reduces fuel burn and tanker demand, and produces significant depot and field maintenance cost and manpower savings.”
- “B-52H re-engining is an excellent pilot program for expanding the use of Energy Savings Performance Contracts beyond fixed facilities and into mobile systems.”**

Other Air Force Upgrades

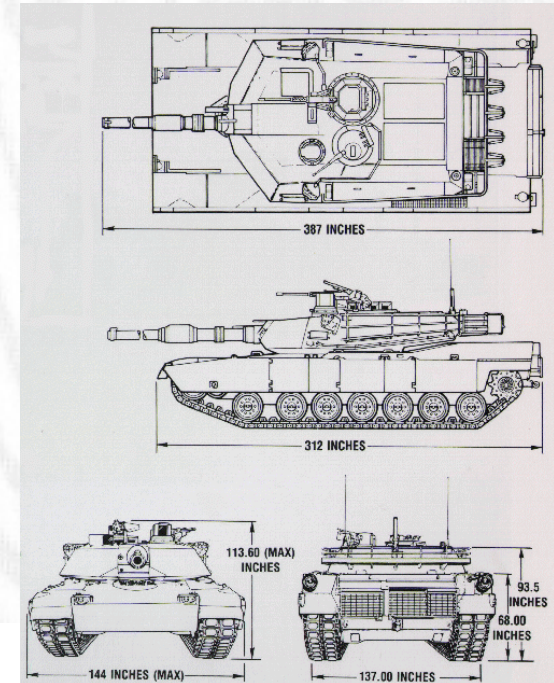
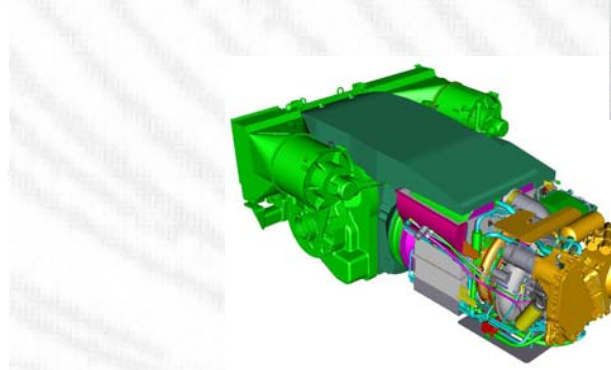
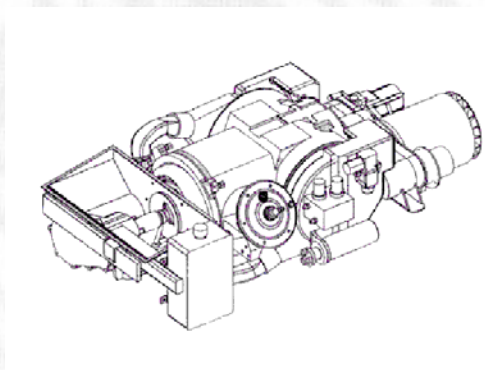


In addition to the Defense Science Board recommendations, the C-5 Galaxy strategic transport aircraft is a potential candidate:

- The US Air Force has already initiated a comprehensive upgrade program.
- The first phase of the upgrade is the Avionics Modernization Program (AMP).
- The second phase, the C-5 Reliability Enhancement and Re-engining Program (RERP) is to upgrade the aircraft's engines, pylons and improve reliability.

Abrams Main Battle Tank

- Abrams tank main engine upgrade or remanufactured replacement for the current (30-year-old) AGT 1500 engine.
- Abrams tank auxiliary power unit (APU) to provide power to electrical, hydraulic and climate control systems while in “silent watch” defensive posture.



Navy “Hotel Load” Gas Turbine Generators

Navy ships’ “hotel loads” are actually very similar to lighting, heating and cooling functions covered in traditional “facility” ESPCs. Generators and virtually any energy consuming equipment onboard ships could be upgraded under a Mobile ESPC.



The Three Choices

A. *Outright Purchase*

\$4 Billion

B. *Pay Over Time*

\$8 Billion

C. *Do Nothing*

\$15 Billion

Case Study



How the Federal Government Upgraded Capability and Saved \$140 Million Using Alternative Financing

The Problem:

U.S. Government collects time-critical information from numerous polar-orbit satellites at a unique and remote location above the Arctic Circle.

Once collected at the remote location, the information had to be re-transmitted to the U.S. through other geo-synchronous satellites, which was expensive, slow and unreliable.

NASA, NOAA and USAF agreed that the solution was the installation of a 1,300 kilometer fiber-optic cable connecting the remote Arctic Ocean island with the European mainland.

However, this solution had a barrier: there were no capital appropriations to implement the \$40 million project – only \$10 million in annual operating funds to purchase satellite time.



Case Study Economics

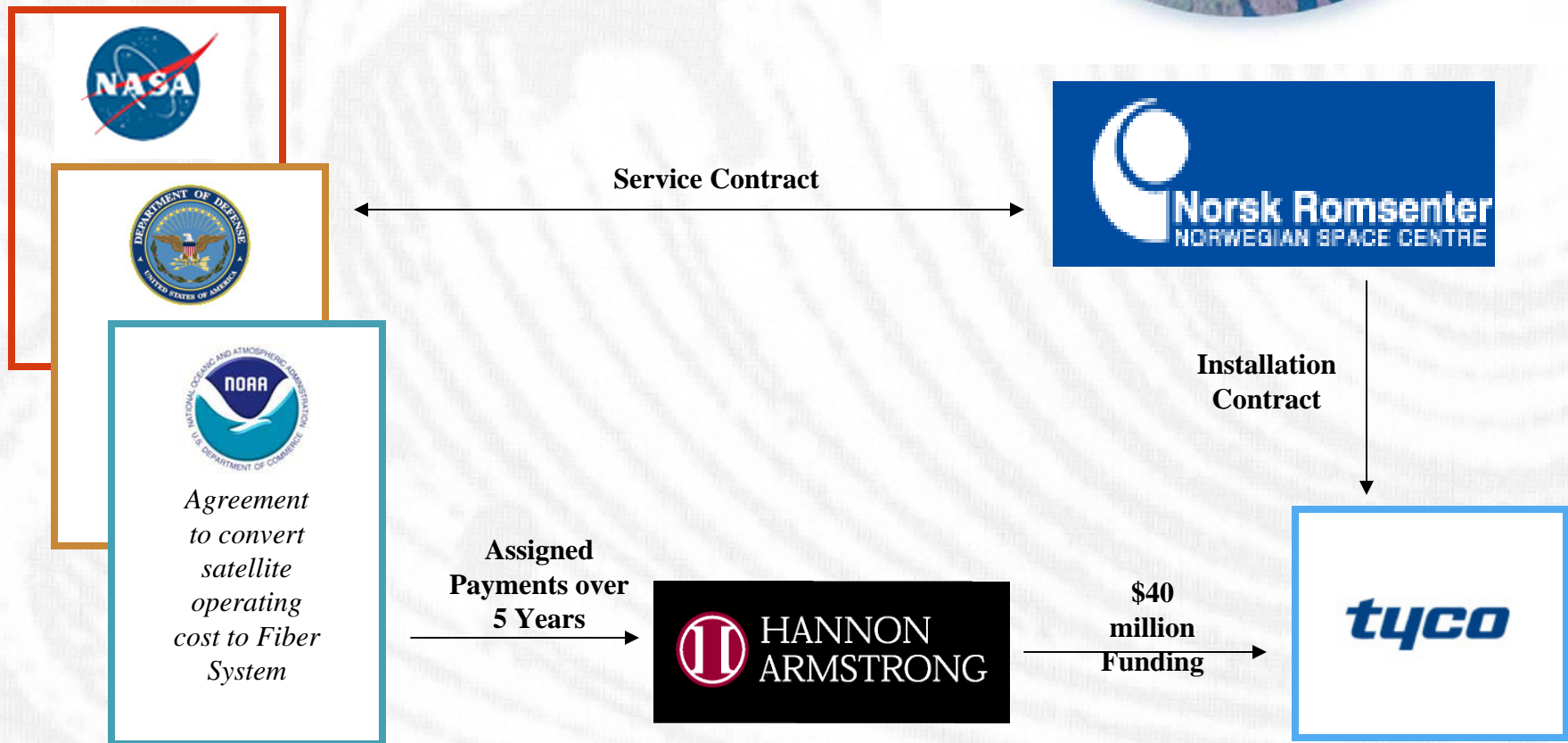
The Solution:

Convert budgeted operating dollars into a stream of payments that could support the \$40 million upfront capital investment required to implement the service contract.

	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>....</u>	<u>2025</u>
Budgeted Operating Payments:	\$10m	\$10m	\$10m	\$10m
Total Projected Payments:	\$200m	←			
System Cost (paid over 5 years):	\$40m				
Net Savings (years 6 thru 25):	Approx \$140m				



Case Study Structure





Case Study Results

Federal Government realizes substantial budget savings while receiving the benefits of a vastly improved information system.

Specifically, the fiber-optic system is:

Faster -- 12 times faster

Better -- No bi-annual sun outages and other atmospheric effects

Cheaper -- Saves \$140 Million for the U.S. Taxpayer



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