Description of document:	**US Navy Special Focus Study on Utilities Privatization, 15 March 2005**
Requested date:	23-September-2008
Released date:	30-October-2008
Posted date:	20-March-2009
Title of Document	Naval Inspector General Report to DASM (I&F) Utilities Privatization Study, 15 March 2005
Source of document:	Office of the Naval Inspector General Attn: Legal Office 1254 Ninth Street, S.E. Building 172 Washington Navy Yard, DC 20374-5006 Email: NAVIGLegal@navy.mil

DEPARTMENT OF THE NAVY
NAVAL INSPECTOR GENERAL
1254 9TH STREET SE
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IN REPLY REFER TO:
5720/09-002
Ser 00K/ 1261
30 Oct 08

This letter responds to your Freedom of Information Act (FOIA) request of September 23, 2008. Your request sought three documents:

1) A copy of the Naval Inspector General Special Focus Study-Interrogation Special Focus Team-GITMO-OEF-OIG.

2) A copy of the Special Focus Study on Utilities Privatization.

3) A copy of the Special Focus Study-Sexual Assault Study (SAVI).

A copy of the later two studies is enclosed. The first study requested, the ISFT report, is a Department of Defense (DOD) report, which DOD has posted on its website at:

http://www.dod.mil/pubs/foi/detainees/other_related.html

If you have any questions about what was released or withheld from that report you should contact the DOD FOIA Office at:

Office of Freedom of Information
1155 Defense Pentagon
Washington, DC 20301-1155.

5720/09-002
Ser OOK/ **1261**
30 Oct 08

You may contact Ms. Pat Chase, at (202) 433-2222, or Mark O'Brien, at 202-433-2224, in our legal department if you have any questions.

Sincerely,

PAUL D. GARST
Captain, USN
By direction

Enclosures: (1) Copy of Utilities Privatization Study
(2) Copy of SAVI Study

NAVAL INSPECTOR GENERAL
REPORT TO DASN(I&F)

Utilities Privatization Study

15 March 2005

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Contents

EXECUTIVE SUMMARY

WHY DID WE DO THIS STUDY

In November 2003, members of the Naval Inspector General's Installation and Environment Division briefed the Deputy Assistant Secretary of the Navy (Installations and Facilities) on the Navy's Energy Management Program. Immediately following that brief, the DASN (I&F) requested the Naval Inspector General to provide an assessment of the status of the Navy's Utilities Privatization efforts. The NAVINSGEN Utilities Privatization Study is a direct response to the DASN (I&F) request.

CHRONOLOGY OF EVENTS

The Utilities Privatization (UP) Study began in early 2004 with the development of a scope of work and a proposed inspection plan. The Naval Inspector General (NAVINSGEN) endorsed the inspection plan and issued the announcement letter on 29 January 2004. During the next few months NAVINSGEN staff met with Navy and private industry leadership, attended industry forums and participated in a Navy Utility Privatization Program Managers meeting.

NAVINSGEN staff found little analytical data documenting the cost of implementing the UP program. In order to identify and gather additional information, NAVINSGEN staff developed and issued a data call to the Naval Facilities Engineering Command and their Engineering Field Divisions in March 2004. Based on data and information collected, NAVINSGEN staff prepared a draft brief with preliminary findings. This brief was presented to the OSD utilities privatization staff in June 2004.

Subsequent to this brief, VCNO directed NAVINSGEN to divert efforts to another special inquiry, which delayed the finalization of the study for approximately four months. NAVINSGEN staff resumed work on the Utilities

Privatization Study in November 2004, collecting additional data from Navy and industry sources to complete the report.

WHAT THE NAVAL INSPECTOR GENERAL FOUND

In a climate of reduced shore installation management resources, the Navy is projecting to spend between $130M and $150M on the Department of Defense (DoD) Utilities Privatization (UP) mandate. Having spent nearly $90M to date, not a single utility system has been privatized using the authorities established in the U.S. Code; only 20 systems have been recommended for privatization (3% of eligible systems). Under the most optimistic projection, the Navy will privatize no more than 25% of its utility systems. This very low projected UP success rate, alone, is cause for the Naval Inspector General (NAVINSGEN) to recommend that the Navy stop all current UP efforts and formulate a new utilities management strategy. Continuing the current policy will result in a fragmented utilities management system, which may lead to higher utilities costs for the Navy in the future.

Assumptions and Perceptions

The UP initiative is based on the perception that it is no longer in the best interest of the DoD to own and operate its own utility systems. The DoD assumed that most of its utility systems would be privatized, and only those few systems that have special security concerns or prove to be economically infeasible will be given waivers from privatizing.

Normally a policy decision such as the UP initiative that could have potentially large positive or negative budget impacts is based on a thorough analysis. In this case, no analysis was performed by DoD prior to directing the services proceed with this initiative, and none has been performed to date. NAVINSGEN has compiled a list of assumptions from interviews with DoD and Navy personnel that normally would have been considered prior to undertaking initiatives such as this.

Based on interviews with DoD and Navy personnel, the following assumptions and misperceptions have adversely influenced the UP initiative:

- There are ample private sector buyers of utility systems;
- The market can absorb the purchase of a very large number of utility systems in a relatively short period;
- The private sector can provide utility services inherently cheaper than the public sector;
- DoD would be able to pay the increase in "must pay" utility bills (i.e., maintenance, repairs, recapitalization, and utility services included in the monthly utility bills);
- The private sector maintains their utility systems to a higher standard than DoD;
- Total divestiture is the only UP model to follow;
- Utilities management is not a core function of the military and privatization will reduce or stabilize DoD's utility management costs; and
- All of the services utility systems are poorly maintained.

These assumptions have been compared to actual results to date. Unfortunately, NAVINSGEN has found most of the assumptions were based on incorrect information and that the required economic analyses have been much more extensive, complex and more costly than originally anticipated. It is for this reason that so much time has been expended to determine that privatizing these systems is uneconomical or lacks sufficient market interest.
Additionally, there are many obstacles and unresolved issues that hinder Navy attempts to pursue economical privatizations. Despite the DoD requirement to obtain Source Selection Authority decisions on 65% of utility system by September 2004, DoD only issued (Oct 04) guidance on critical issues affecting both the decisions and the schedule.

Studies indicate that most Navy utility systems are in good condition and would not require significant rehabilitation.[1] The use of Navy Working Capital Funds (NWCF) to support Navy utility system operations is unique among the services. NWCF include recapitalization and maintenance costs in the rate structure and is more in line with private sector practices.

[1] Arthur D. Little, Inc "Utilities Privatization at Department of the Navy East Coast Installations" Briefing to DASN of 25 Jan 2002

As a way to maximize competition, the Navy is using two different acquisition strategies (aggregation and site specific) to solicit interest among public utilities and private companies, and has encouraged industry innovation in the process. Despite these efforts, utilities privatization has repeatedly shown itself to be uneconomical.[2]

Security Concerns and Vulnerabilities

The UP program has not evolved to reflect the post 9/11 security environment. Conceived with the goal of improving energy infrastructure using private investment, and fueled by the desire to "get out of the utilities management business," the UP initiative does not address the greater concern of energy security
and the preservation of the defense mission. Evaluation of the vulnerabilities of our national electric utility networks reveals weaknesses that, if exploited, "…could result in a long-term, multi-state blackout. While power might be restored in parts of the regions within a matter of days or weeks, acute shortages could mandate rolling blackouts for as long as several years."[3] An indication of these vulnerabilities was demonstrated during the power outage that struck the northeast region of the United States in August 2003. Although this was a wide-spread outage, neither the cause nor the recovery time should be used to compare it with a deliberate, well coordinated terrorist attack on the electrical transmission system. In addition to crippling the economy, an extended regional power outage would have catastrophic effects on the Navy's ability to accomplish its mission.

Studies continue to point to the electrical transmission system as our most serious vulnerability because of its prominence in the operation of most other utilities, and the interconnected nature of the utility infrastructure as a whole. The Navy must find ways to ensure its continued mission performance in the face of potential disruptions to its electrical distribution systems and the nation's

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[2] DoN 4th Quarter Utilities Privatization Report
[3] *Making the Nation Safer: The Role of Science and Technology in Countering Terrorism* The Committee on Science and Technology for Countering Terrorism, National Research Council; National Academy Press 15 August 2004, 181

electrical transmission network. The private sector could help the Navy meet its modernization goals and improve its energy security. Inviting the private sector to develop ways of providing energy independence for Navy bases could be a win-win situation for both the Navy and the private sector by:

- Decreasing vulnerability to disruptions of commercial power networks;
- Providing inherent on-base security to critical power generation assets;
- Reducing distributed energy development costs by negotiating offsets for locating private power generating facilities on Navy land, and authorizing capacity in excess of Navy needs to be sold to the commercial sector;
- Enhancing the ability of our installations to come to the aid of local communities in a power crisis;
- Helping local utility companies manage peak energy demand, and
- Providing a basis for evaluating options for private sector management or ownership of the Navy's utility distribution systems.

WHAT THE NAVAL INSPECTOR GENERAL RECOMMENDS FOR UP

- SECNAV request DoD authorization to suspend all Navy utility privatization initiatives underway and redirect efforts to the next recommendation.

- OPNAV N4 task NAVFAC to develop a comprehensive Navy strategy for utility system management. This strategy should include a business case analysis for the preferred economic model for operations during all security conditions, and to plan, prepare and operate the Navy's utility systems during a large natural or terrorist disaster. This strategy must provide Regional Commanders essential operation criteria and back-up utility requirements.

- NAVFAC prioritize options to ensure continued mission operations during emergency or malicious attacks and establish criteria for utilities support.

- CNI develop utility business case analyses to assess the benefits, economics, and issues associated with all utility service options such as Navy operated, leasing, public/private partnerships and distributed generation. Analysis should incorporate NAVFAC criteria for utilities support and the CNI continuity of operations strategy.

BACKGROUND

Historically, funding needed to operate, maintain and upgrade utility systems on Department of Defense (DoD) installations has had to compete with a broad range of other installation priorities. Direct mission support and new weapons procurement needs are often funded at the expense of operation and maintenance (O&M) of utility systems. In general Navy's utility systems may have fared better than other services by virtue of its use of the Navy Working Capital Fund (NWCF) in all major Fleet concentration areas. Similar to the private sector, the NWCF provides for O&M and recapitalization costs to be factored into the customer rate structure.

The Defense Reform Initiative (DRI) issued in November 1997, expanded the longstanding practice of outsourcing operation and maintenance to include the total divestiture of all DoD utilities systems by conveying ownership of those systems to the private sector. The objective of the DRI was to get DoD out of the business of owning, managing, and operating utility systems. Authority to convey DoD utility systems to "…a municipal, private, regional, district, or cooperative utility company or other entity" is provided to the Secretaries of each service through Section 2688, Title 10 of the U.S. Code.

Although there is no conclusive economic analysis to confirm it, there is a perception that privatizing utilities relieves installation commanders of responsibilities that can be done more efficiently by non-DoD entities. It is anticipated that privatization will allow private sector capital and expertise to bring the historically under funded, unreliable and substandard DoD systems up to industry standards.

DoD Reform Initiative Directive (DRID) #9, dated 10 December 1997, directed the "Military Departments…to develop a plan for privatizing all of their utility systems (electric, water, waste water and natural gas) by January 1, 2000, except those needed for unique security reasons or when privatization is uneconomical." In addition the Under Secretary of Defense for Acquisition & Technology [USD (A&T)] was tasked with developing uniform criteria for determining security and economic exemptions. Each service was to present its plan, which included

organizational requirements, as well as a timetable with internal benchmarks for measuring progress, to the Defense Management Council no later than 13 March 1998.

DRID #49, which followed on 23 December 1998, acknowledged that both the number of systems available for privatization and the complexity of the issues associated with the effort were significantly understated in the original DRID. In an effort to account for and to address these newly identified factors, the DRID provided more detailed guidance for both privatization actions and the determination of exemptions. The DRID set forth the following Plan of Action & Milestones for each Military Department:

- Submit revised Utility Privatization Plans to the USD (A&T) no later than 23 December 1998,
- Determine which systems will or will not be offered for privatization by 30 September 2000,
- Release all solicitations no later than 30 September 2001,
- Award privatization contracts for all utility systems no later than 30 September 2003, and
- Beginning on 15 April 1999, submit quarterly progress reports to the USD (A&T) that include proposals to improve efficiency and eliminate barriers to privatization.

DRID #49 explicitly encouraged the services to investigate innovative business approaches, and specifically urged the services to work together and with the Defense Energy Support Center to initiate, "... at least one joint, regional utility privatization plan." The USD (A&T) was to determine if legislative relief should be sought to resolve the potential obstacles imposed by the 10-year limitation on utility service contracts and the tax treatment of utility system conveyances.

By September 2001, feedback from the utility industry indicated that the more than 1,300 utility systems that were either in the solicitation process or awaiting the release of a Request for Proposal (RFP) would saturate the market, thus hindering industry participation and potentially reducing competition. Consequently, on October 9, 2002 the Deputy Secretary of Defense replaced DRID #49 with "Revised Guidance for the Utilities Privatization Program."

The revised guidance required the services to complete a privatization evaluation of every utility system at all military installations not designated for base closure, both CONUS and OCONUS, by 30 September 2005. Each of the services were directed to submit a detailed schedule of its revised plan to the Under Secretary of Defense (Acquisition, Technology & Logistics) [USD (A,T&L)] and provide updates to the schedule every year on 30 September. Quarterly status reports comparing actual progress to plan schedule are to be submitted to the Deputy Under Secretary of Defense (Installations and Environment) [DUSD (I&E)]. In addition the Revised Guidance established the following POA&M:

- DUSD (I&E) issue final interim milestones for each service component by 15 October 2002,
- Close RFPs or submit certificates of exemption on at least 80% of each service component's utility systems available for privatization by 30 September 2003, and
- Reach Source Selection Authority (SSA) decisions or submit certificates of exemption on at least 65% of a service component's utility systems available for privatization by 30 September 2004.

NAVY WORKING TO MEET UP DEADLINES

NAVINSGEN found Navy personnel are working diligently to meet DoD privatization deadlines. However, based on reported data and progress to date, we are not confident that the Navy will meet the UP source selection decision goals and objectives within the projected time frame.

WHAT DOES THE DATA SAY?

Figure 1, titled "Navy UP Progress," is based on data extracted from the Navy's quarterly UP status reports that SECNAV provides to the Deputy Under Secretary of Defense for Installations as required by DRID #49. This figure depicts Navy progress and resources expended from 1999 to October 2004. The horizontal line in the middle of the chart separates government owned systems (below the line) from those systems privatized using 10 U.S.C. Section 2688 authority (above the line). As of October 2004 not a single system has been privatized using Section 2688, Title 10 U.S.C. authorization. The 20 systems shown above the line have SSA decisions recommending privatization, but the systems are not currently privatized.

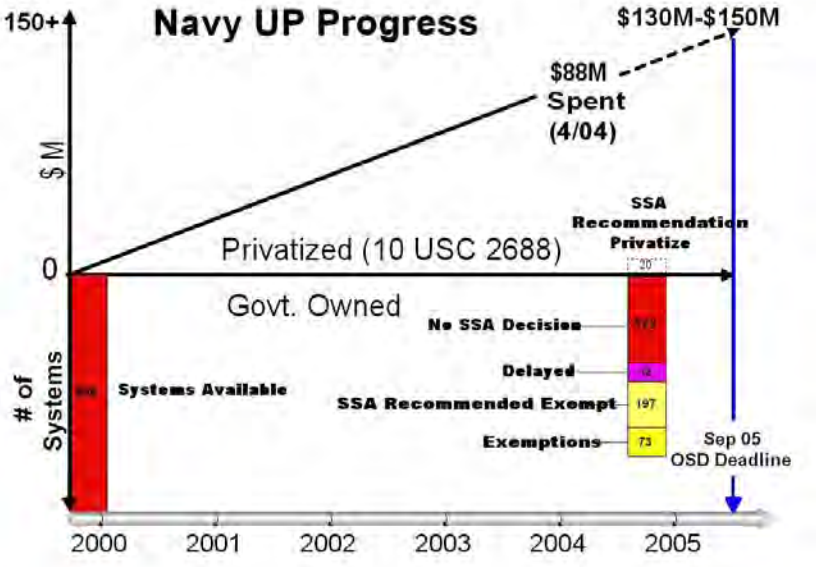

Figure 1 **Source: NAVFAC & Navy UP Quarterly Report Oct 04**

Note The Navy initially identified 900 systems. For various reasons such as base closure, bundling, deferral, change in ownership the number of systems is now at 645

The Navy's October 2004 draft *Quarterly Report on Utilities Privatization* states the DON now has 645 utilities systems "available to privatize." The phrase "systems available to privatize" may be somewhat misleading. Fifteen (15) of the 645 systems were privatized through other means (e.g., housing privatization) during the last 5 years. Deducting those15 systems already privatized by other means, leaves 630 systems "available to privatize."

A closer look at Figure 1 provides a better understanding of the Navy's privatization efforts to date. The status of those 630 systems is depicted on the multi-colored bar extending below the "privatization line." Of those 630 systems:

- 20 systems have been recommended for privatization;
- 328 are awaiting SSA decisions;
- 12 systems are currently involved in litigation and SSA decisions are delayed indefinitely;
- 197 are recommend exempted by recent SSA decisions as either uneconomical or no market interest; and
- 73 have been granted security or economic exemptions and will not be privatized.

The DoD interim milestone for SSA decisions required 65% of the systems to have SSA decisions made by 30 September 2004. As of 30 September 2004, the Navy has spent about $90M, and reports that SSA decisions for only 47% (305) have actually been made. The Navy estimates it will spend between $130M and $150M in total labor and contractor costs to meet UP 2005 deadlines. Yet, as of October 2004, only 20 out of 630 Navy systems have been recommended for privatization under the DoD privatization program. The most optimistic privatization estimate received by NAVINSGEN indicates that 25% of the Navy's available systems are feasible for privatization. To reach this optimistic figure nearly 50% of the decisions for systems still under consideration will have to recommend privatization. This result would be inconsistent with progress to date.

UNDERESTIMATING OBSTACLES, OVERESTIMATING SUCCESS?

DoD has successfully privatized a limited number of individual systems. This experience may have led privatization advocates to underestimate the level of effort and overestimate the services' ability to privatize every DoD utility system. The overall process is complex and requires an extensive commitment of

engineering, contracting and legal expertise. A flow chart depicting the complexity of this process can be found in Appendix A.

The Center for Naval Analyses (CNA) cautioned the Navy that the DoD approach to privatization could be fraught with obstacles.[4] CNA raised serious concerns about the DoD's high risk approach to UP and specifically noted:

- DoD schedule was very ambitious; DoD should work on privatizing the worst systems first;
- DoD should follow the private sector model and not seek full title transfer (The title transfer concept is too high risk for the private sector. Unlike the DoD, the private sector would retain ownership, or at a minimum include a buy-back option in the contract);
- Contract periods of up to 50 years create bilateral monopolies and substitute litigation for market forces in determining contract satisfaction.

While a more in depth discussion of the obstacles to privatization can be found in the following section, it is fair to say that the resolution of these issues has added time and additional effort to the process. In some instances, it has taken years to gain industry interest and to work through the UP process. The Defense Energy Support Center (DESC) estimates a best case of 14–20 months to complete the process, provided there are no delays, problems or protests.[5]

Naval Facilities Engineering Command personnel and contractors have worked diligently using two different acquisition strategies to solicit private sector interest and to overcome the private sector's main concerns of profitability and liability. Meetings were convened to provide a forum for government and private industry personnel to discuss their mutual concerns; projects were advertised nation-wide in the Commerce Business Daily (now the Federal Business Opportunities); certified letters were sent directly to potential buyers; site tours

[4] *Utility Privatization Initiatives: Concerns, Metrics, Priorities*, CNA, Ackerman, Seamans, Sutherland. Mar 2001
[5] CAPT R. Marrs brief *Department of Defense Utilities Privatization Program Responses to Industry Questions* DESC Conference, 29 Sept 04

were conducted; and systems were aggregated, split, and/or recombined in an effort to develop the most attractive package.

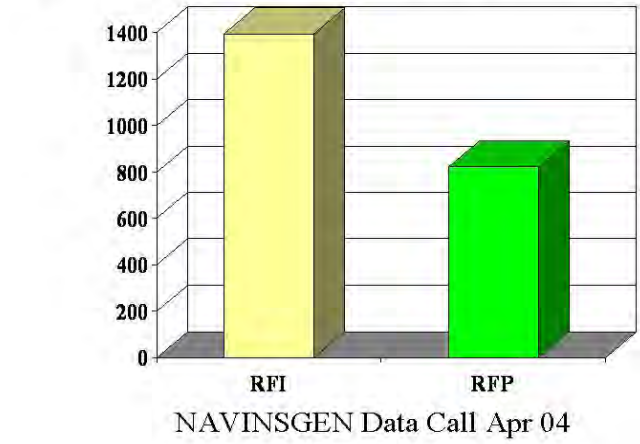

Figure 2 **Source: NAVINSGEN**

Figure 2 depicts the decline in private sector interest between those who expressed initial interest in purchasing Navy utility systems and those who actually bid on them. Figure 2 displays the difference between Requests for Interest (RFI) and Requests for Proposal (RFP) on UP projects. The lack of market interest has caused problems for the Navy. Additionally, DESC has noted a similar lack of interest in attempting to privatize utilities for both the Army and Air Force.

DESC's "Top 10 Reasons" for lack of market interest are:

1. Excessive risk to company,
2. Excessive upfront capital requirements,
3. Excessively long contracting process,
4. Incomplete understanding of the RFP process,
5. Binding specifications,
6. Government negotiation/contracting process too different,

7. Ownership transfer requirements are too complex,
8. Accessibility to installation too onerous,
9. Proposal not considered profitable for the company, and
10. System(s) geographical separation made proposal too uneconomical.

It appears that as the complexity of privatization came to light and unanticipated obstacles and issues arose, the DoD issued additional guidance and extended deadlines. There was no requirement to evaluate the cost/benefit ratio or return on investment of continuing the privatization process.

COMPLEXITIES OF THE PRIVATIZATION PROCESS

As evidenced by the failure to meet milestones and the extension of deadlines, the utility privatization process is more complex then originally anticipated. Directives were issued and deadlines established without first reconciling other, sometimes contradictory, federal acquisition, land transfer and tax laws. Seven years after the first DRID, DoD and DoN are still answering legal questions and developing policy, even though the interim deadlines have passed.

Formulating a process and establishing guidance to combine real property transfer with the acquisition of utility services required reconciling 10 U.S.C. 2688 with other laws and regulations such as Federal Acquisition Regulations (FAR) and Internal Revenue Service (IRS) rulings. The task of soliciting interest from the utility industry and developing a new business sector has been equally challenging Deadlines for completing the source selection process were extended twice since the initial Defense Reform Initiative of November 1997.

DoN working groups comprised of NAVFAC engineers and contracting officers met on several occasions to identify and resolve implementation issues. The working group sorted through legal issues such as:

- Application of labor laws (Davis Bacon Act and applicability of the Service Contract Act),
- Rules for using consultants (18 U.S.C. 1905 and 5 U.S.C. 3109),
- Impact of termination liability clause (anti-deficiency rules),
- Application of environmental laws (Environmental Base Line Assessment and National Environmental Policy Act),
- Identifying appropriate contract clauses (UP and FAR),
- Rules for the cost of due diligence,
- Strategy for rate intervention, and
- Processes for negotiating with regulated and deregulated utility companies.

Additionally, NAVFAC personnel addressed questions regarding fund management, changing roles of Navy utility managers, impact of public-private venture (PPV) housing initiatives, methods for evaluating UP data, contract

model template and real estate documentation. Additional questions were raised regarding the impact of other program changes, such as utility de-regulation and Base Realignment and Closure 2005. Although issues have been identified, the short time line has not permitted deliberation of the full impact of these competing requirements

Key challenges include:

Fair Market Value (FMV) – 10 U.S.C. 2688(c) requires the recipient of the utility system to compensate the government for the FMV of the system, as determined by the Secretary. FMV can be determined by one of several methods outlined in the DoD guidance. Compensation is either through lump sum payment or a reduction in the charges for utility services. Although this appears relatively simple, issues surrounding tax code, (see next section) and various methods for determining FMV complicate the process outlined in the 10 U.S.C. 2688. Industry representatives expressed concern that allowing multiple methods for determining FMV would increase bid development cost, and complicate tax and finance issues.

Contribution in Aid of Construction (CIAC) – CIAC is a federal tax paid by "for-profit" contractors when the IRS-calculated FMV is higher than the contracted FMV. Furthermore, under FAR Part 31.205-41, federal income taxes are not an allowable government cost. Therefore, the increased risk/cost is a deterrent to the perspective utility contractor.

A deviation to the FAR eliminates this obstacle and potentially encourages private companies to bid on utility contracts. DUSD just recently obtained this deviation to the FAR, and implementing guidance was issued on 20 October 2004. This late approval has contributed to the delays and uncertainty to the prospective bidders.

Cost Accounting Standards (CAS) – Title 48 Code of Federal Regulations Part 9903 requires government contractors to conform to very specific CAS requirements on all contracts in excess of $500,000. Most utility companies use different accounting procedures. In some instances,

these accounting standards are required by local/state regulatory commissions. Conforming to two standards would increase the cost, and deter contractors interested in government contracts.

Although federal regulations provide some exemptions, few of these apply to utility privatization contracts. Therefore, DUSD (I&E) requested a blanket CAS waiver for utility privatization contracts. The Cost Accounting Standards Board granted the waiver to CAS under certain conditions. Implementing guidance was recently provided on 20 October 2004, after the September 2004 deadline.

Safety, Health and Environmental Indemnification - As described in Figure 3, health, safety and environmental indemnification issues can present barriers to completing transfer of ownership. Although Navy policy provides parameters for addressing these issues, utility companies may hold differing viewpoints.

NAS Barber's Point Issues Could Not Be Resolved

Both the Navy and the local electric company were interested in privatizing the electric utility system at NAS Barbers Point following BRAC '93. Despite mutual best efforts and after years of negotiation, Hawaiian Electric Company (HECO) withdrew for the following reasons:

- **Environmental Liability** – HECO requested indemnification for all future environmental problems. They stated that the Army had agreed to pay for future environmental problems in a separate transfer; therefore the Navy should add the same contract clause. Due to the Anti-deficiency Act, the Navy could not put anything in the contract regarding environmental liability. Instead the Navy suggested that if environmental damages were discovered at a later date, HECO could use other legal remedies. HECO refused to accept this alternative.

- **Safety Indemnification** - The Navy typically runs telecommunication lines in the electric duct bank. Therefore, private contractors and the local telephone company would need access to these same manholes and duct banks. HECO wanted the Navy to hold them "harmless" for potential safety hazards or injuries to these telecommunications contractors. The Navy could not accept this clause.

HECO refused to accept the Navy's terms for environmental and safety indemnification, and ended negotiations with the Navy.

Figure 3 **Source: PWC Pearl Harbor**

Reconciling 10 U.S.C. 2688 with existing federal, state and local laws/regulations presents unique legal and contracting obstacles. In some instances, guidance was not provided until **after** the 30 September 2004 deadline that required the Navy to complete SSA decisions for 65% of the systems. While policy issues have been resolved for some issues, a full assessment of the impact of all the decisions has not been completed.

INFLEXIBILITIES IN PRIVATIZATION METHODOLOGY

Although DoD is trying to mirror the privatization successes achieved by the commercial sector, its methodology does not include many of the flexibilities that contribute to the success of private sector programs. The requirement to fully and irrevocably transfer ownership, and the required duration of the contracts to obtain utility service after privatization are the key differences that separate the DoD from the private sector approach to privatization.

DoD insists that the services *sell* their utility systems so that risks associated with property ownership are transferred to the new owners. Once sold, however, the Navy could find it has fewer options for relief if the new owners provide substandard service. Leasing the utility systems, as often done by the private sector, would give the Navy more flexibility. The Center for Naval Analyses (CNA), hired by the Navy to evaluate its privatization program, also questioned DoD's approach. CNA warned that, "…differences with the private sector should raise serious concerns. They suggest that the military's approach may not be optimal."[6]

Utility System Ownership – DUSD (I&E) policy requires the Navy to fully convey (sell) their utility system infrastructure, then purchase the essential utility services from the new owner.[7] Since there are no other customers on most Navy distribution systems, transferring ownership to a private entity creates a bilateral monopoly, where both the Navy and the new utility system owner must rely on the other as the sole source for buying/selling utility services.[8] This arrangement removes competition as a motivating force. With a bilateral monopoly, negotiators and lawyers, not economic conditions, dictate terms of the contract between the Navy and the owner. The CNA study cautioned that in a bilateral monopoly, "Each party can essentially hold the other hostage."

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[6] Glenn H. Ackerman, Andrew M. Seamans, Ronald J. Sutherland *Utility Privatization Initiatives: Concerns, Metrics, Priorities*, Center for Naval Analysis (CNA), March 2001, p 1
[7] Deputy Secretary of Defense, *Revised Guidance for the Utilities Privatization Program*, (Memorandum U15628 02), October 9, 2002
[8] Ackerman et al, Utility Privatization Initiatives: Concerns, Metrics, Priorities

Current rules prohibit lease agreements, where the government retains ownership of the system and the contractor operates/maintains the infrastructure. Under a lease agreement scenario, the Navy purchases utility services from the contractor, but retains control of the system in cases of the contractor performance deficiencies. Leases are attractive because they can significantly reduce contract costs.

Leasing could also lower cost to the Navy by eliminating the "cost of capital" incurred by a contractor who must borrow funds to pay the Navy for the purchase cost of the utility system infrastructure. A study conducted for the Navy by Arthur D. Little noted "the financial advantages of capital leasing could significantly reduce the Navy costs." [9] The study "…did not identify any major impediments to including [leases] as a privatization option."[10]

DoD's latest policy guidance makes clear its intent to fully convey ownership. The policy explicitly states it wants to "…get out of the utility business…" and "…convey all right, title, and interest in the utility system… through appropriate conveyance documents." The guidance does permit a 'lease-to-own' contract, but only on a case-specific basis when "…the Secretary concerned determines that delayed transfer of title is economically preferable to an immediate transfer of title, the Secretary may structure the conveyance as a lease-purchase or a lease in furtherance of conveyance, as long as the non-federal entity at some point takes title to the asset." While this option does offer the government some protection during the lease period, it is still requires the conveyance of system ownership. Capital leases used by industry are not a privatization option within the DoD guidance.

Protective Clauses – Most large private sector utility service contracts contain protective clauses allowing title to revert to the previous owner. In contrast DUSD (I&E) guidance through DRID 49 did not include provisions for the

[9] Arthur D. Little, *US Navy Utilities Privatization: Protecting the Navy's Interests, Protective Clauses and Capital Leasing*(PowerPoint Presentation), March 2002, p16
[10] Arthur D. Little, *US Navy Utilities Privatization: Protecting the Navy's Interests, Protective Clauses and Capital Leasing, Slide #20*

termination of service or the reclamation of utility system ownership in the event of utility service contractor non-performance. Under this scenario, regardless of the satisfaction with the new owner, the government would be required to continue purchasing services from the owner or invest in new infrastructure to duplicate the infrastructure and services itself. The Arthur D. Little study evaluated several options available to minimize the Navy's risks, provide rapid remedies for non-performance, and help to ensure appropriate service. The study evaluated these options against any potential negative impacts and determined that the Navy "should utilize an integrated set of protective clauses in all of its legal documents for utility systems being privatized…" [11]

DoD's revised guidance now permits the use of reversionary clauses. While these clauses allow the title to revert back to the government, DoD permits implementing reversionary clauses "only in extreme cases of non-performance such as abandonment or bankruptcy with no provisions for continued services."

Contract Duration – While most private sector contracts last for 7 to 10 years, DoD guidance allows for contracts up to 50 years. Even the most insightful long-term service contract cannot foresee all potential contingencies. It is unlikely such contracts can adequately identify system improvements and adapt to changing security requirements. The Navy, like other DoD components, needs a reliable and secure electrical infrastructure to fulfill its mission. The Navy cannot afford to underestimate future requirements or risk underinvestment in utility systems infrastructure by committing to a potentially short-sighted, long-term service contract. Attempts to modify deficient contractual arrangements with only a single service provider would likely be very costly to the Navy.

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[11] Arthur D Little *US Navy Utilities Privatization: Protecting the Navy's Interests, Protective Clauses and Capital Leasing, Slide 14*

PERCEPTIONS ABOUT THE UTILITY INDUSTRY

The DRIDs and DoD guidance on utility privatization were based on flawed assumptions and misperceptions about the commercial utility industry. Perhaps the greatest misperception of utility privatization was that DoD could benefit from the commercial sectors' best practices, innovations, financing and efficiencies. No formal business case analysis was used to validate either the basis or economic benefits of many of these perceived benefits. The most compelling of these key perceptions are that the commercial utility industry has:

- Higher utility infrastructure recapitalization rates,
- More modern infrastructure than DoD utility systems,
- Inherently more efficient utility system management, and
- Sufficient back-up redundancy to preclude long term loss of service due to natural disasters and malicious attacks.

Other misperceptions or unresolved issues related to utilities privatization discussed in other parts of this report include:

- The private sector is interested in buying all government owned utility systems,
- The commercial market could readily purchase a very large number of government offered utility systems in a relatively short period of time,
- The DoD can absorb the increase in "must pay" utility bills (i.e. maintenance, repairs, recapitalization, and utility service would be included in monthly utility bills),
- Total divestiture is the only UP model acceptable to DoD,
- Utility management is not a core function of the military and privatization will lower DoD utility management costs, and
- All of the military services maintain their utility systems to the same standards.

These perceptions are either incorrect, inaccurate, or ignore the Navy's utility system operations, maintenance and recapitalization programs.

Electrical distribution systems are typically the largest utility systems managed by the DoD and there is agreement that electrical utilities are critical to the operation of most other utilities. Key misperceptions about the electrical industry are discussed below:

Perception: Commercial industry has higher recapitalization investment rates

NAVINSGEN could not find data supporting the perception that private industry invests or recapitalizes at a higher rate than the Navy. We have found that commercial utility construction expenditures have *declined* in the last two decades.[12] Figure 4 shows that since 1995, commercial construction expenditures have lagged behind asset depreciation.

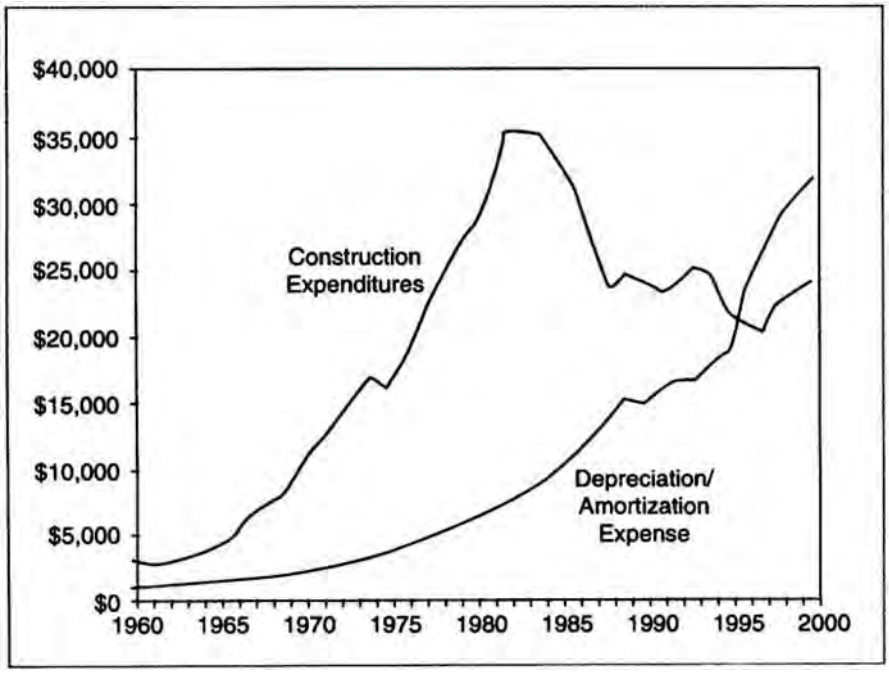


Figure 4 **Source: EEI & EPRI**

[12] Massoud Amin, "Balancing Market Priorities with Security Issues, *IEEE Power & Energy*, July/August 2004

This reduced investment has created conditions where the utility system is "becoming increasingly stressed" with associated greater risks of "serious disruption."[13] The Navy is attempting to improve funding to meet more stringent OSD facility sustainment models. Navy utility systems in Fleet concentration areas are recapitalized through the Navy Working Capital Fund at the recently reorganized "Facilities Engineering Commands" (FECs). Included in the FEC utility rates are recapitalization funds such as major and minor maintenance. Figure 5 shows Navy budgeted maintenance costs in the Mid Atlantic area trend upward from FY00-07 indicating increased investments in the MIDLANT region.

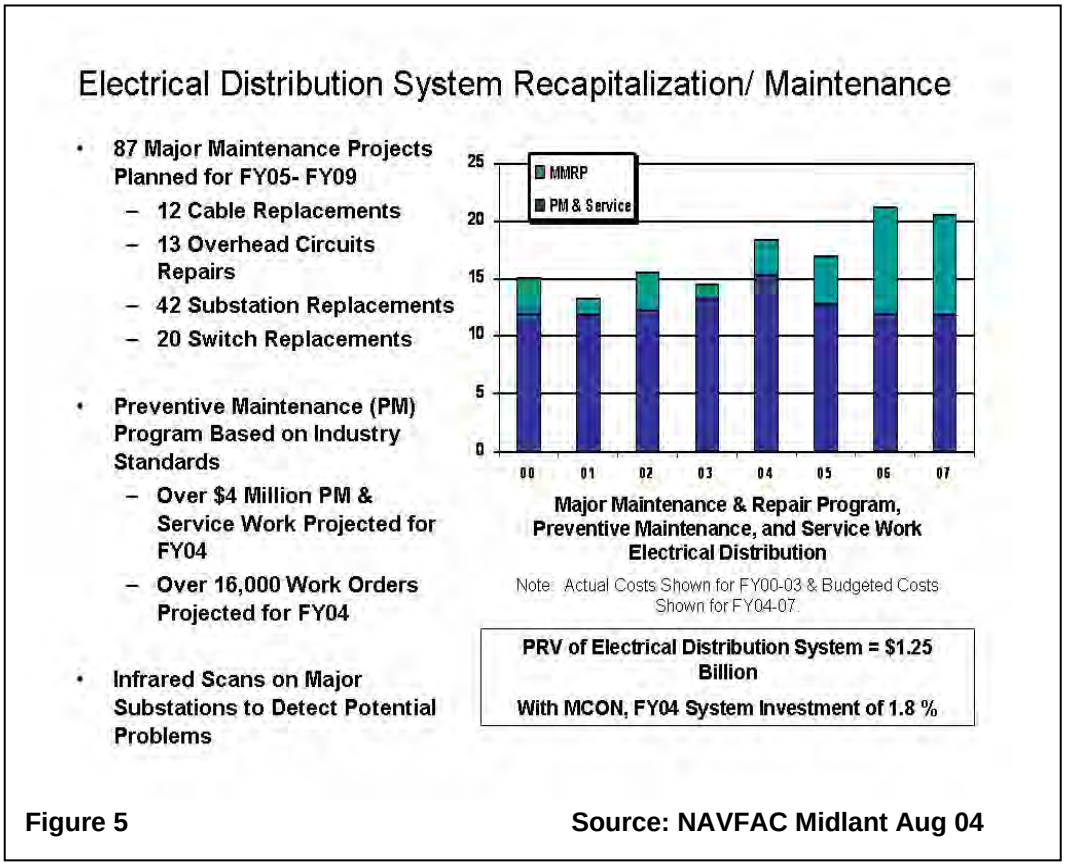


Figure 5 **Source: NAVFAC Midlant Aug 04**

[13] Amin, "Balancing Market Priorities with Security Issues", 33

Perception: Commercial infrastructure is more modern than DoD utility systems

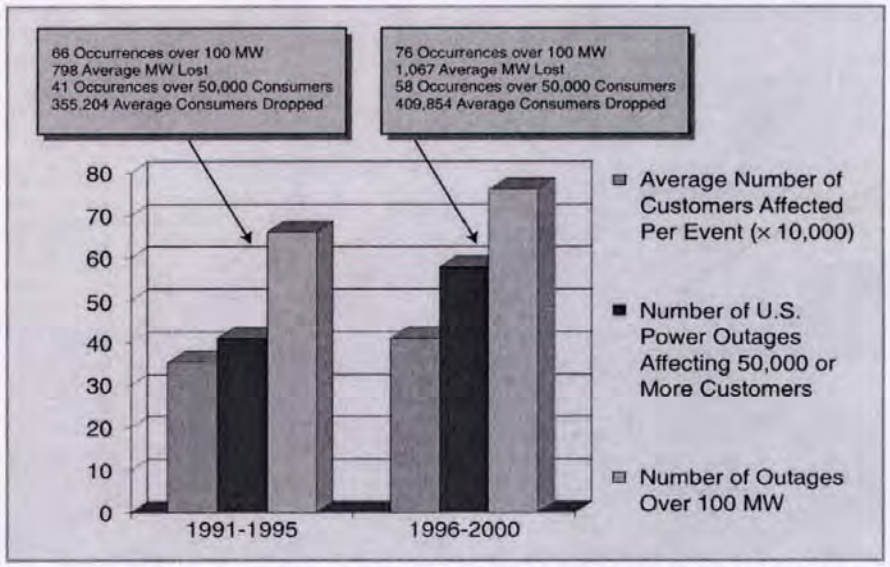
The electrical utility industry is subject to many forces including advancing age and associated reliability concerns. These factors must be considered when evaluating the impact of providing utility service to the military. The following quotes from present some industry perspective:

> "Today's electric power delivery system is based largely on technology developed in the 1950's or earlier and largely installed over the last 30 to 50 years."[14]

> "The North American energy grid is aging, increasingly fragile, buffeted by deregulation and market forces, stressed by relentlessly increasing demand, operating at near capacity with decreasing staffs and reliant on electronic components."[15]

In addition to an aging infrastructure, industry is struggling to accommodate constant increases in demand. This strain is evident in the recent large scale power failures. The increasing frequency and size of U.S. power outages of 100 MW or higher are shown in Figure 6.

[14] Massoud Amin, "North America's Electricity Infrastructure: Are we ready for more perfect storms?" *IEEE Security & Privacy*, September/October 2003, 30-38
[15] Paula Scalingi, "Reflections on the State of Infrastructure Security," *The CIP Report December*, 2003, Volume 2, Number 6, 3, 15-16



Increasing frequency and size of U.S. power outages 100 MW or more (1991–1995 versus 1996–2000), affecting 50,000 or more consumers per event. Generally, a relatively small number of U.S. consumers experience a large number of outages; conversely, outages that affect a large number of consumers are quite rare; however, this plot could also indicate that the number of larger outages could be rising (data courtesy NERC's disturbance analysis working group database).

Figure 6 **Source: IEEE Power & Energy Jul/Aug 04**

While adequate data was not available to compare investment over time between the Navy and the commercial sector, the data clearly indicates a decline in recapitalization, reliability and capacity in the commercial sector that cannot be ignored in the Navy's long-term energy strategy.

Perception: Commercial industry utility management is inherently more efficient than military utility management

The lack of business case analyses make it difficult to assess or compare the economics associated with utilities managed by the commercial sector. Navy utility rates include costs for in-house maintenance and operation of utility

systems. PWV electrical rates for Navy customers in the Norfolk area are typically 10-15% lower than comparable commercial electrical rates.[16]

The commercial utility industry is currently in a state of major change. Competitive forces in the utility industry including deregulation, cost competition, and regulatory uncertainty all influence how companies manage utility systems. The book *Making the Nation Safer* by the National Research Council offers some insights into industry trends. These trends include:

- reducing investments in infrastructure,
- running equipment closer to capacity limits,
- keeping fewer spares on hand, and
- spending less on research and development.

Perception: Commercial industry has redundancy to preclude long term loss of mission due to malicious attack

Protection of *critical* aspects of the utility industry in the post 9/11 world should not be underestimated. Industry experts consider the integrity of the electrical system to be the greatest concern. There is little evidence to support the perception that the commercial electric industry has enough redundancy and reserve capacity to overcome a malicious attack. In fact "…reserve capacity (the difference between installed capacity and the amount that's necessary to meet peak demand) has become small for generation, transmission, and distribution."[17] Much of the U.S. electrical system is spread over vast distances that make it very difficult to protect. Military installations are improving their infrastructure protection and security. An Electric Power Research Institute (EPRI) November 2001 assessment[18] presents three kinds of potential threats to the U.S. electricity infrastructure:

1. Attacks upon the power system (simultaneous multi-pronged attack on the system),
2. Attacks by the power system (using the electrical infrastructure as a weapon), and
3. Attacks through the power system (attacking the civil infrastructure).

[16] PWC Norfolk Electrical Rate History FY94-03.
[17] National Research Council, *Making the Nation Safer*
[18] Amin "Balancing Market Priorities with Security Issues", 34

Studies have identified critical nodes, representing less than 5% of the national electric grid, where redundancies do not exist.[19] At these critical junctions equipment losses could create multi-state power failures requiring replacement transformers that could take as much as "…1.5 years to build, transport, and install."[20] These critical nodes usually involve transformers that are specially made for a particular application and fabricating new transformers requires more than a year. These transformers are large and expensive. As long as they are in good operating order power companies are reluctant to invest in back up capability, since transformers of this size tend to have high reliability under normal condition. A major concern is that these transformers could be subject to malicious attack by determined terrorists. This situation poses a potential threat to Navy readiness. Industry is looking to develop modular universal extra-high-voltage (EHV) transformers to be used in emergencies. In addition, industry experts are conducting an Infrastructure Security Initiative to identify key vulnerabilities in the electric power grid and design immediately applicable countermeasures.

Utility security must be addressed in any Navy privatization action. DoD UP guidance specifically requires that "competitive procedures must ensure utility services resulting from privatization are sufficient to support installation missions in a reliable and resource efficient manner." The Navy should identify and assess these critical nodes and establish plans to address these vulnerabilities accordingly.

[19] Making the Nation Safer, National Research Council . . .
[20] Infrastructure Security Initiative (ISI), EPRI, Oct 2003 p 1

CHANGES NEEDED IN UTILITIES OUTSOURCING STRATEGIES IN THE POST 9/11 SECURITY ENVIRONMENT

In the wake of the 9/11 attacks, vulnerability assessments of the national electrical grid reveal the system is not as well maintained and capitalized as perceived, and, more importantly, power failures could adversely affect the Navy mission.[21] Privatizing ownership does nothing to mitigate these risks. Recognition that the impact of vulnerabilities in the commercial power network could shut down significant, multiple defense installations for extended periods of time has neither altered DoD timelines for UP, nor motivated the services to re-evaluate their overall utility strategies in the face of these threats.

Protecting Navy Mission

Development of more secure energy options could protect the Navy mission. One potentially effective and protective option for improving energy security is distributed generation. It has analogies to the Navy home-porting initiative of the 1980s. By distributing smaller generating capacity at multiple locations, the pitfalls of relying on a single remote source of power are greatly reduced. In addition to providing greater energy security, there are a host of additional benefits to distributed generation:

- It is often an attractive investment for commercial utilities because it can obviate the need for building large new plants in order to meet escalating demands where little reserve capacity exists,
- It can be used as a buffer during conditions of peak demand, allowing new plants to be sized economically,
- It can minimize disruption to critical loads during system-wide outages,
- It increases flexible response to natural and man-made outages, and
- It can be used to protect critical defense mission that relies on a vulnerable external source for power.

[21] Massoud Amin, "North America's Electricity Infrastructure: Are we ready for more perfect storms?, IEEE Security and Privacy, Sept/Oct 2003, 19-25

The Navy has distributed generation is the Naval Air Warfare Center, China Lake. Using a proven geothermal energy resource, private capital was used to construct power plants that supply the warfare center with power, and the excess generated is sold to the commercial sector. In addition, the Navy receives residual income from the system to pay for many of its other energy conservation program needs.

While most Navy bases do not have an exploitable energy source on base, the concept of distributed energy generation has merit. The Navy does have available and secure land where distributed generation energy systems could be sited. This concept could improve the Navy's energy security and be compatible with DoD's UP goal.

A framework for a public/private energy security partnership

Navy priorities for energy management should be: energy security first; efficiency and economy second. The private sector could play a role in ensuring the Navy's energy security. Just as public and private capital was used to develop energy resources at China Lake, the Navy should seek expertise and capital from the private sector to enhance the energy security of its bases.

The majority of the nation's electrical power distribution involves large generating facilities and extensive power transmission lines. Most of these systems are owned by public utilities with the remainder in the hands of independent power producers. New public/partnerships with utilities could provide basic redundant power sources advantageous to both the Navy and utility companies and be compatible with utility peak demand initiatives. Excess generated capacity could be sold commercially and the Navy could still negotiate its rates with utility companies while maintaining priority for power if there is a large outage that could affect mission.

Additionally, distributed generation at Navy facilities might ease the process of privatization. If each base becomes, in effect, a 'micro-network' without being captive to a single source for its energy needs, the ownership and servicing of the network becomes less monopolistic. Additionally, since the distributed generator

can sell to the external grid, there is more than one source of revenue for the generator.

THE BOTTOM LINE

NAVINSGEN found that the continued pursuit of the utilities privatization initiative will have little positive impact on the Navy. Many issues and obstacles hampered the Navy's progress and few, if any, benefits accrued. NAVINSGEN questions whether the Navy should continue to expend scarce resources on this initiative.

It is now clear that, when all privatization efforts have been exhausted, the Navy will still retain the majority of its utility systems. Given the lack of an economic or business case analysis, and considering the expenditure of nearly $100M to date, it is questionable whether the benefit of privatizing a small number of utility systems can justify investing an additional $30 -$50M in this program. Of equal importance are concerns about how privatization will affect the vulnerability and security of the Navy's utility systems.

Since there does not appear to be sufficient economic justification to proceed with privatizing a limited number of Navy utility systems, the Navy should consider asking DoD if it could shift its focus and scarce resources to a more flexible approach for ensuring efficient utility system operations and management that takes into account post 9/11 vulnerabilities and security concerns.

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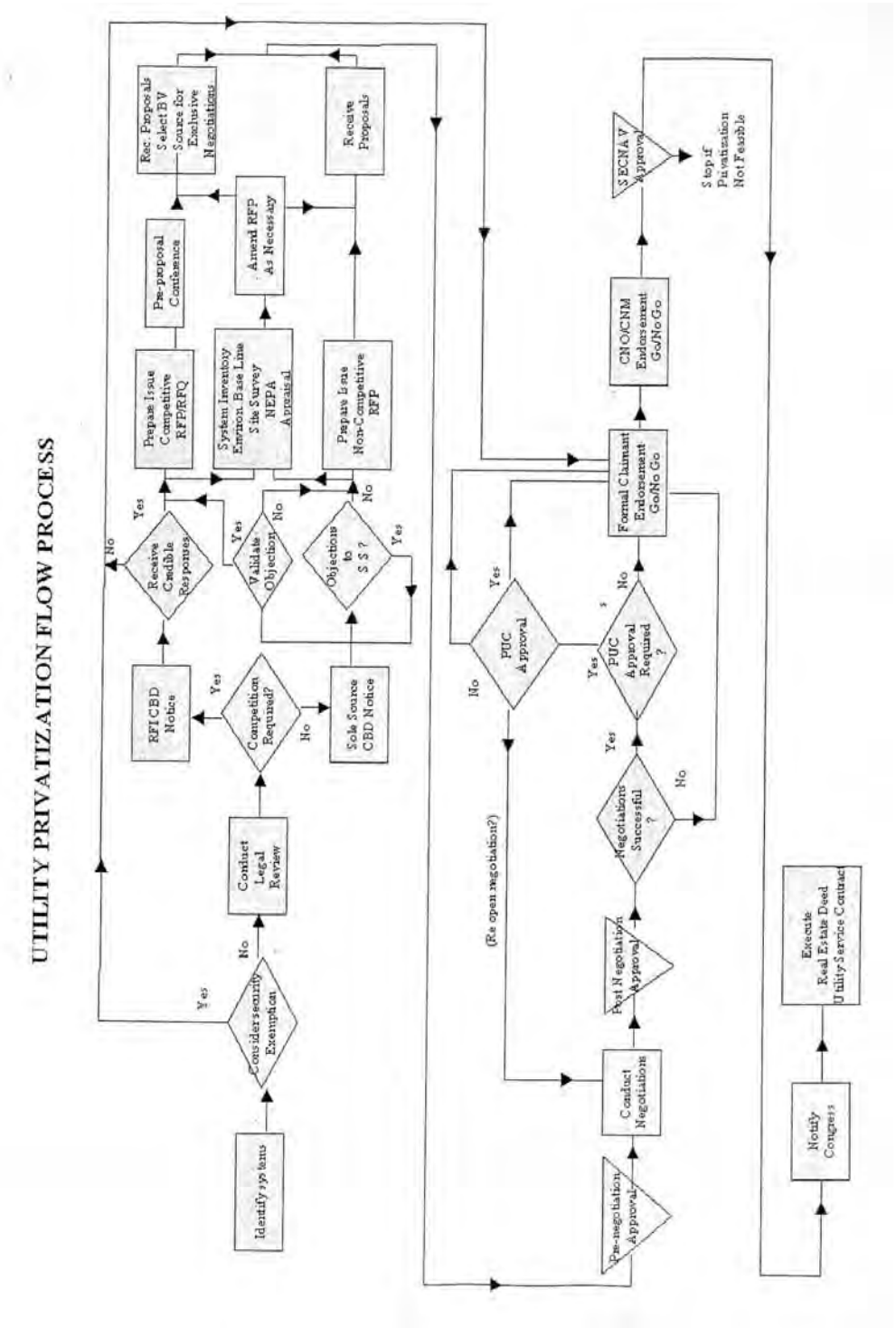
APPENDIX A - UTILITIES PRIVATIZATION FLOW PROCESS



APPENDIX B - NAVINSGEN UP DATA CALL SPREADSHEET

4/8/2004	Utilities Privatization Data Call Responses									
	Water	Wastewater	Gas	Electric	Other	Totals		Inception til1Mar04	Projected 3/04-9/05	Totals
# of Utility Systems	170	162	74	168	18	592	# of man hours (In-house only)	479,694	269,213	748,907
# of RFI responses received	412	391	220	298	73	1394	Total Cost ($)	$87,856,917	$43,023,753	$130,880,670
# of attendees at site visit	251	251	106	187	38	833	In-house costs ($)	$25,116,524	$16,639,594	$41,756,118
# of RFP responses received	240	259	72	239	11	821	Contractor costs ($)	$61,605,211	$26,297,039	$87,902,250
# of systems w/o local interest	113	111	28	46	17	315	Misc.costs ($)	$1,135,182	$87,120	$1,222,302
# of systems with no interest	38	33	23	23	6	123				
# of systems w/decisions pending	130	128	46	140	13	457				
# of SSA decisions complete	32	26	25	22	5	110				
Contract Award	3	3	4	4	0	14				
Exempt	14	12	11	15	4	56				