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The Privatization of Department of Defense Electric Utility Systems: Combining Similar Energy Requirements through Application of Performance Contracting

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I. Introduction

The Department of Defense (DoD) faces extraordinary change as it prepares to enter the twenty first century. With the end of the Cold War, policy makers in Congress and the defense establishment are re-examining the structure and mission of the DoD. Base closure, outsourcing, privatization, and acquisition reform are strategies being used to re-shape the DoD to improve its efficiency. One area receiving intense scrutiny is defense infrastructure.[1] In addition to buildings and facilities, the infrastructure of each military installation consists of a network of systems designed to provide utility service to organizations and activities located within its confines.

Electric utility systems on military installations are antiquated and require major repair or replacement.[2] To address this problem, Congress recently authorized the DoD to privatize these systems.[3] Besides privatizing their electric systems, installations must satisfy other energy requirements. These requirements include (1) the purchase of electric utility service, (2) reducing energy consumption, and (3) the use of renewable technologies and sources of electric generation.[4] Each requirement relates to the other in that each effects electric consumption in some way. Contracting for each requirement separately, as is the current practice among military installations, results in inefficiency--both economic and non-economic.

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[1] *See infra* notes 14-35 and accompanying text.
[2] *Id.*
[3] 10 U.S.C. § 2688 (1994).
[4] *See infra* Part III.A-C.

The privatization of military electric utility systems also provides an opportunity to combine related energy requirements into a single performance-based contract. The DoD benefits from an integrated energy contract in three ways. First, a military installation gains economically as the contractor strives to attain the performance incentives, geared toward price and quality, specified in the contract. Second, one contractor coordinating installation energy requirements reduces conflict which can occur when energy requirements are acquired separately. Finally, the installation Contracting Officer benefits as a result of having to award and administer one contract as opposed to four separate contracts.

This thesis is divided into three parts. The first part examines the privatization of military electric utility systems. In addition to describing the composition of an electric system, this section details the deteriorating condition of military systems and explains how privatization is expected to remedy the problem. The statutory authority and DoD implementing instruction are also discussed.

The second part describes installation energy requirements and the current methods installations use to acquire each. The statutory and regulatory basis for each requirement is also examined. This section concludes with a discussion of the Energy Savings Performance Contract (ESPC). The ESPC is the primary tool installations use to reduce energy consumption. With modification, installations could use the ESPC as a starting point in creating a performance contract encompassing each of the requirements discussed in this thesis.

The final part describes the fundamental principles and requirements of performance contracting. This section explains why each energy requirement should be combined into

a single contract. The legal authority for combining these requirements is also reviewed. This section concludes with a discussion of incentives and penalties installations could include in a contract to maximize contractor performance.

II. Privatization of Department of Defense Utility Systems

A. Military Installation Electric Utility Systems

A military installation resembles a small city or town in size and structure. Like any town, installations have housing areas, grocery stores, hospitals, churches, and shopping centers.[5] Each of these buildings depends upon a complex network of utility infrastructure consisting of an electric, natural gas, water/wastewater, and telecommunication system.[6] Military departments provide, and in some cases sell, utility service to military activities, private individuals, and non-federal organizations located within the confines of the installation.[7]

Reliable electric service is key to each installation's operation. Most installations do not generate electricity. Instead, installations purchase electricity from an electric utility company.[8] The utility company delivers electricity at high voltage to an electric substation, normally located just inside the installation boundary.[9] The substation reduces the voltage level of the electricity so that it can be safely distributed to buildings and facilities.[10] Control and ownership of the electricity transfers from the utility to the

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[5] DEPARTMENT OF DEFENSE, PROCUREMENT OF ELECTRICITY FROM MOST ECONOMICAL SOURCE- REPORT TO CONGRESS 8 (1996) [hereinafter PROCUREMENT FROM MOST ECONOMICAL SOURCE].
[6] *Id.* at 3.
[7] *See* 10 U.S.C. § 2686 (1994) (providing authority for military departments to provide utility service on or near military installations).
[8] *See infra* notes 84-120 and accompanying text describing the acquisition of electric utility service on military installations.
[9] AIR FORCE LOGISTICS MANAGEMENT AGENCY, UTILITY CONTRACTING REFERENCE GUIDE 6 (Sept. 1996) [hereinafter UTILITY CONTRACTING GUIDE].
[10] *Id.* at 6.

installation upon delivery to the substation. Once delivered, the installation becomes responsible for distributing power to end-users.[11]

Other than electric substations, an installation electric system consists of transmission circuits, primary circuits, electric transformers, switching stations, and miles of utility wires and poles.[12] Each installation operates and maintains its utility system without assistance from the serving utility company.[13]

B. The DoD Strategy for Addressing Deteriorating Utility Infrastructure

The majority of DoD electric utility systems are antiquated and require major repair or replacement.[14] Utility repair and maintenance have never been a priority among the military departments. While the typical utility company spends up to eight percent of its plant replacement value on annual operations and maintenance, the Army spends just one percent.[15] Given this lack of attention, the DoD must now determine how to remedy and, most importantly, pay for needed utility repairs. According to one DoD estimate, it will cost over twenty billion dollars to upgrade and repair existing installation utility systems.[16]

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[11] *Id.* at 7.
[12] *Id.* at 6. For a detailed and understandable description of the technical components of an electrical system, *see* WASHINGTON STATE ENERGY OFFICE, KEEPING THE SPARK IN YOUR ELECTRICAL SYSTEM: AN INDUSTRIAL ELECTRICAL DISTRIBUTION GUIDEBOOK (1995).
[13] Steven J. Allenby, *Military Utility Privatization: A Good Tactic for Distribution Companies?*, E-SOURCE, Oct. 1998, at 2.
[14] *Id.* Most DoD utility systems have never been replaced. Given that the average military installation is forty-two years old, it is understandable that these systems require significant overhaul or replacement.
[15] Allenby, *supra* note 13, at 3. Total utility operation and maintenance figures for the Air Force and Navy have not been reported but are projected to be within this range.
[16] *Id.* at 2.

Besides utility systems, the DoD must contend with other parts of defense infrastructure needing repair. Industrial plants, dormitories and family housing areas are in serious decay and require significant renovation or replacement.[17] One reason for the poor condition of defense infrastructure can be attributed to DoD budget priorities. Recent defense budgets emphasize the acquisition of major weapon systems rather than facility operations and maintenance.[18] Remarkably, it was not until early 1997 that the DoD determined that its budget was insufficient to support the weapon systems it requires and major renovations to its infrastructure.[19]

Like a spendthrift consumer with a cash flow problem, the DoD concluded it would have to sell assets that it could no longer afford to maintain. In November of 1997, Secretary of Defense William Cohen announced a series of proposals ostensibly designed to reform DoD operations.[20] Collectively, these proposals are called the Defense Reform Initiative (DRI).[21] While packaged as "reform," the DRI is little more than a planning document for how the DoD intends to allocate its limited fiscal resources and streamline operations.[22]

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[17] *See generally* GEN. ACCT. OFF., REPT. NO. GAO/T-NSAID-08-115, *Defense Infrastructure: Challenges Facing DoD in Implementing Reform Initiatives* (Mar. 18, 1998) (providing an extensive overview of the condition of DoD infrastructure) [hereinafter *Defense Infrastructure*].

[18] Robert D. Paulus, *DoD Reforms Business Practices*, ARMY LOGISTICIAN, March 1998, at 1.

[19] *See* DEPARTMENT OF DEFENSE, QUADRENNIAL DEFENSE REVIEW 53 (May 1997) [hereinafter QDR]. This finding first appeared in the Defense Reform Initiative Report published in late 1997. *See* DEPARTMENT OF DEFENSE, DEFENSE REFORM INITIATIVE REPORT 37 (Nov. 1997) [hereinafter DRIR].

[20] *See* QDR, *supra* note 19.

[21] *See* DRIR, *supra* note 19.

[22] *See* GEN. ACCT. OFF., REPT. NO. GAO/T-NSAID-99-95, *Defense Reform Initiative: Progress, Opportunities, and Challenges* 3 (Mar. 2, 1999). The DRI consists of four initiatives. First, re-engineer defense business practices to model those of the private

The DRI outlines two initiatives for addressing deteriorating infrastructure-- base closure and privatization.[23] Base closure reduces the amount spent on operations and maintenance by eliminating facilities no longer required for defense purposes.[24] In contrast, privatization aims to transfer ownership and operation of government assets to the private sector.[25] In transferring assets, private sector capital finances needed repairs and maintenance without the use of appropriated funds.[26] The theory underlying privatization is that private industry can operate and maintain certain assets more efficiently than the DoD.[27] This supposition is consistent with the National Performance

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sector. Second, re-organize and reduce the size of military commands and defense agencies. Third, use outsourcing and privatization as tools to streamline defense activities and expand competition. The final initiative, the closure of defense facilities and installations, requires congressional approval.

[23] *Id.* at 3.

[24] *See* DRIR, *supra* note 19, at 37. The DoD plans to seek congressional authorization to conduct two rounds of base closings in 2001 and 2005. The base closure process is designed to be bipartisan. However, many legislators accused President Clinton of "politicizing" the issue during the 1996 congressional election. As a result, Congress is not expected to take action on the DoD request until after the next presidential election. For analysis of the politics of base closure, *see* David Pace, *Southern Lawmakers Cool to Pentagon Call for New Base Closures,* ASSOCIATED PRESS POL. SERVICE, Feb. 3, 1998, *available in* 1998 WL 7382454. For a description of the base closure process, *see* Benjamin L. Ginsberg, et al., *Waging Peace: A Practical Guide to Base Closure*, 23 PUB. CONT. L. J. 169 (1994).

[25] The policy of government privatization, both political and economic, is the subject of intense debate. For in-depth discussions, *see* Paul Taibl, *Special Report: Outsourcing and Privatization of Defense Infrastructure,* BUS. EXECUTIVES FOR NAT'L SECURITY, Apr. 1997 (generally advocating the privatization of defense infrastructure) *and* Janet Ward, *The Pros and Cons of Long Term Privatization*, AM. CITY AND COUNTY, May 1998, at 54.

[26] DRIR, *supra* note 19, at 41. Use of private sector funds allows the DoD to pay the costs associated with the repair or replacement of an asset over a period of time. In other words, the DoD does not have to outlay hundreds of millions of dollars in any given fiscal year (FY) to fund these projects. Instead, costs related to the replacement or repair appear as part of the contractor's monthly service charge for maintaining the asset.

[27] *Id.* at 43.

Review's recommendation to military departments to privatize or outsource "non-core" mission requirements.[28]

In addition to privatization, the DRI calls for the "outsourcing" of non-essential functions.[29] The terms "privatization" and "outsourcing" are often used interchangeably, although the two are distinct concepts. Neither is defined in the DRI which contributes to confusion. Unlike "privatization," which involves the transfer of government assets to the private sector,[30] "outsourcing" refers to the "transfer of activities that are being performed by federal employees at federal facilities to private contractor employees at federal or private facilities."[31] Outsourcing does not involve the outright transfer of property to the private sector.

The DoD strategy for repairing and overhauling utility infrastructure is to privatize each utility system by transferring ownership to the private sector. Consistent with the theory of privatization, the DoD concludes that private industry has the financial

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[28] President Clinton created the National Performance Review (NPR) to re-examine government operations. The NPR drafted a series of proposals to improve the efficiency of federal agencies. As used in the NPR, a "non-core" function is a "support function." Support functions are not essential to the performance of the agency mission. Examples of DoD support functions include housing, recreation facilities, utility systems, and facility/grounds maintenance. *See* NATIONAL PERFORMANCE REVIEW, FROM RED TAPE TO RESULTS: CREATING A GOVERNMENT THAT WORKS BETTER AND COSTS LESS (Sept. 1993). DoD recommendations are contained in the Appendix of this report.

[29] DRIR, *supra* note 19, at 34.

[30] RALPH C. NASH JR., STEVEN L. SCHOONER & KAREN R. O'BRIEN, THE GOVERNMENT CONTRACTS REFERENCE BOOK 407 (Geo. Wash. Univ. 2d ed. 1998). For articles on privatization, *see infra* note 283 and Agnes P. Dover, *Outsourcing & Privatization,* BRIEFING PAPERS 2d, Mar. 1997, at 1.

[31] NASH, SCHOONER & O'BRIEN, *supra* note 30, at 380. For a description of how outsourcing is being used by the DoD, *see* Loren B. Thompson, *Defense Outsourcing: The Coming Revolution,* SEA POWER, Feb. 1997.

"resources to invest in these systems and the expertise to maintain them appropriately."[32]

C. The Defense Reform Initiative Directive

A series of Defense Reform Directives implement the DRI. The Defense Management Council, falling under the authority of the Deputy Secretary of Defense, drafts each reform directive.[33] The directives provide military departments with policy guidance and requirements for each reform initiative. On December 10, 1997, the Defense Management Council issued Defense Reform Initiative Directive (DRID) No. 9[34] This directive originally required military departments to privatize all installation utility systems by January 1, 2000. This deadline, however, was later extended to September 30, 2003.[35]

D. Utility Privatization: Overview of Congressional Authorization and DoD Implementation

Shortly after the DRI was published, Congress passed the National Defense Authorization Act for Fiscal Year 1998.[36] This Act authorizes military departments to transfer ownership of utility systems to the private sector.[37] The section of the Act authorizing the transfer of utility systems is the antithesis of clarity.[38] Its wording invites confusion and key terms are undefined.

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[32] DRIR, *supra* note 19, at 43.
[33] *Id.* at iv.
[34] OFFICE OF THE DEPUTY SECRETARY OF DEFENSE, DEFENSE REFORM INITIATIVE DIRECTIVE NO. 9 (Dec. 1997) [hereinafter DRID NO. 9].
[35] OFFICE OF THE DEPUTY SECRETARY OF DEFENSE, DEFENSE REFORM INITIATIVE DIRECTIVE NO. 49 (Dec. 1998) [hereinafter DRID NO. 49].
[36] National Defense Authorization Act for Fiscal Year 1998, Pub. L. No. 105-85, 111 Stat. 1629 (codified in scattered sections of 10 U.S.C.).
[37] 10 U.S.C. § 2688. In describing the process of transferring utility assets, the Act does not use the term "privatization." *See supra* notes 29-31 and accompanying text for a description of privatization.
[38] *Id.*

Not surprisingly, an intense policy debate ensued among the DoD and the military departments concerning the meaning and requirements of the legislation.[39] Eventually, the Defense Management Council issued DRID No. 49.[40] This directive embodies the DoD's interpretation of the statute and contains the procedure each military department must follow when privatizing its utility systems. As will be explained, DRID No. 49 restricts the DoD's ability to privatize utility systems in a way that benefits the long term economic interests of military installations. If unchanged, the DoD procedure will effectively preclude, or make extraordinarily difficult, military departments from combining related energy requirements into one contract.

The following subsection consists of three parts. The first examines the requirements of the authorizing legislation. The second part describes how the DoD interprets key provisions of the statute and explains the department's implementing procedure. The probable reasons underlying the DoD interpretation and procedure are also examined. The final section suggests an alternate interpretation of the statutory requirements which is more beneficial to the DoD and is in keeping with Congressional intent.

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[39] *Utilities Privatization Overview: Legal and Regulatory Requirements,* DEFENSE LOGISTICS AGENCY (1998) (conference materials collected from an inter-service meeting discussing Congressional and DoD requirements for utility privatization) (on file with author).

[40] DRID NO. 49, *supra* note 35.

1. The DoD Authorization Act for Fiscal Year 1998[41]

As part of the National Defense Authorization Act for Fiscal Year 1998, Congress authorized military departments to convey installation utility systems to any "municipal, private, regional, district or cooperative" utility company or "other entity."[42] In transferring a system, the military departments may convey all right, title, and interest of the United States unless the service secretary chooses to grant a lesser interest.[43] The legislation defines an "electric utility system" to be any system "for the generation and supply of electric power."[44]

Indicative of the legislation's poor draftsmanship is the improper use of terms having specialized meaning in the utility industry. The legislation provides that an electric system is a system providing for the "generation and supply" of electricity.[45] As used in the utility industry, "generation" is often used synonymously with "supply." Both refer to electric generation facilities.[46] Only one percent of DoD installations have electric

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[41] 10 U.S.C. § 2688. This article discusses privatization solely as it relates to DoD electric utility systems. In addition to electric systems, the legislation authorizes the privatization of natural gas systems, water/wastewater facilities, and telecommunication systems.

[42] *Id.* § 2688(a). Interestingly, "other entity" is not defined in the statute or its legislative history. *See* H.R. CONF. REP. NO. 105-340, 105TH Cong., 1st Sess., at 858 (1998), *reprinted in* 1997 U.S.C.C.A.N. 2251, 2644. As will be described, the wording of the statute suggests Congress intends the DoD to maximize competition when privatizing utility systems. If the intent is to increase competition, then "entity" should be interpreted broadly to encompass any person, corporation, partnership, trust, or similar structure capable of acquiring, operating, and maintaining an installation utility system. The DoD procedures do not clarify the meaning of "entity."

[43] 10 U.S.C. § 2688(a). Service secretary refers to the Secretary of the Army, Air Force or Navy.

[44] *Id.* § 2688(g)(1)(A).

[45] *Id.*

[46] Telephone Interview with James Snook, Defense Utilities Energy Committee Member, (Mar. 24, 1999) [hereinafter Snook Interview]. The Defense Utilities Energy Committee is an inter-service committee tasked with discussing and proposing policy relating to the

generation capability.[47] Most military electric systems are distribution systems which deliver electricity to buildings and facilities.[48]

Besides the incorrect use of key terms, the statute is silent on the specific procedure the military departments are to follow when transferring their utility systems. Instead, the DoD appears to have authority to create rules and conditions governing the privatization of these systems.[49] The statute does require use of "competitive procedures" if more than one utility or "entity" expresses interest in acquiring a system.[50] "Competitive procedure" is undefined, but presumably means procedures mandated by federal procurement law and regulation.

The statute requires each utility transfer to meet certain economic pre-requisites. First, military departments must receive sufficient consideration for each utility system before it is conveyed to the private sector.[51] Consideration must equal the fair market value of the utility system and can take the form of a "lump sum" cash payment or a reduction in charges for utility service.[52] However, if the utility service is regulated by either a state or federal agency, then any reduction in charge must be approved by the applicable regulatory body.[53]

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provision of electric utility service on military installations. The committee reports to the Deputy Undersecretary of Defense for Environmental Security. *See also* Alexander J. Zakem, *Competition and Survival in the Electric Generation Market,* PUB. UTIL. FORT., Dec. 1, 1991, at 23.

[47] Snook Interview, *supra* note 46.

[48] Allenby, *supra* note 13, at 2.

[49] 10 U.S.C. § 2688(f) (authorizing the creation of additional terms and conditions necessary to protect the interests of the United States).

[50] *Id.* § 2688(b).

[51] *Id.* § 2688(c)(1).

[52] *Id.* § 2688(c)(1)(a)-(b).

[53] *Id.* § 2688(c)(2). *See infra* notes 112-120 and accompanying text describing how utility service is regulated at the state and federal level.

A second economic pre-requisite relates to the cost effectiveness of the transfer. A utility system can be privatized if the transfer is life-cycle cost effective.[54] The life-cycle costing procedure developed by the military departments, which must be approved by the DoD, must ensure the long-term economic benefit of the conveyance exceeds long-term economic costs.[55] The procedure must also ensure that the transfer reduces the long-term costs of utility service.[56]

The legislation concludes with a description of how military departments can use funds generated from the sale of utility assets.[57] Funds can be credited to the installation account that pays for utility service or can be used to finance installation energy conservation projects.[58] Monies can also be used to upgrade or replace other installation utility systems.[59]

2. DoD's Implementation: Defense Reform Initiative Directive No. 49

DRID No. 49 contains the procedure the military departments must follow when privatizing their utility systems. Unless exempt due to security reasons, the Directive requires military departments to privatize utility systems using federal acquisition

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[54] 10 U.S.C. § 2688(e)(1).
[55] *Id.* § 2688(e)(1)(A).
[56] *Id.* § 2688(e)(1)(B). The DoD requires life-cycle costing procedures to be consistent with Office of Management and Budget (OMB) Circular A-94. *See* DRID NO. 49, *supra* note 35. This circular establishes requirements federal agencies are to follow when conducting cost benefit analyses and life-cycle costing. *See* OFFICE OF MANAGEMENT AND BUDGET CIRCULAR A-94 (Oct. 29, 1992).
[57] 10 U.S.C. § 2688(f).
[58] *Id.* § 2688(d)(1)(B).
[59] *Id.* § 2688(d)(1)(C).

procedures.[60] The Directive also encourages military departments to develop innovative contract approaches to utility privatization.[61]

In creating its policy, the DoD faced the unenviable task of determining congressional intent from a poorly worded statute. Given the statute is a mere 675 words in length, the DoD had ample opportunity to create procedures installations could easily follow and which would result in the greatest value to military installations.

First, the DoD resolved the ambiguity found in the statute's language concerning the "supply/generation" distinction. To effectuate the intent of the statute, the DoD interprets "generation and supply" to include the "distribution" of electric power.[62] Specifically, DRID No. 49 provides that "supply shall include the distribution" of electric service.[63]

While the DoD correctly interprets "generation and supply" in an expansive way, the department chose a narrower interpretation of other statutory requirements. For instance, the department concludes that the statute requires utility privatization to be accomplished in accordance with state and local law.[64] The Directive further provides that "where state law and regulatory policy specifically prohibit competition, a sole source negotiation may

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[60] DRID NO. 49, *supra* note 35, at 4.
[61] *Id.* at 2.
[62] *Id.* at 3.
[63] *Id.* at 3. According to the cannons of statutory construction, technical words with specialized meaning are to be interpreted in their technical sense, unless such interpretation leads to an absurd result or a result inconsistent with the intent of the statute. *See generally* Nix v. Hedden, 149 U.S. 304, 306-07 (1893).
[64] DRID NO. 49, *supra* note 35, at 3. However, there is no statutory requirement to comply with state or local law. *See supra* notes 41-59 and accompanying text for discussion of the statute's requirements.

be pursued."[65] "Sole source negotiation" refers to a negotiation between the government and the utility company providing electricity to the installation or facility.[66]

The DoD requirement that military departments comply with state law when transferring utility systems appears to be unnecessary. The authorizing legislation does not require or imply that the departments should comply with state law when transferring their systems. It is unclear why the DoD included this requirement as part of its privatization procedure. The Directive does not explain the rationale underlying this requirement nor does it specify where the requirement was derived.

There are two likely reasons for the DoD requirement that military installations comply with state and local law when privatizing utility systems. First, the DoD may be misapplying rules concerning the acquisition of electric utility service to the privatization of electric utility systems. As described in the next chapter, military departments are required to comply with state law when contracting for electric utility service.[67] In most cases, state law requires electric customers to receive service from the utility company holding the service franchise for the customer's geographic area.[68] Accordingly, most installations enter sole source contracts for electric service with the franchised utility.

The requirement that military installations comply with state law when acquiring *electric utility service* originates from laws and regulations unrelated to the legislation authorizing the *privatization* of utility systems. The two are separate and distinct

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[65] DRID NO. 49, *supra* note 35, at 5.
[66] *Id.*
[67] *See infra* notes 110-115 and accompanying text.
[68] *Id.*

requirements subject to different rules and procedures.[69] The legislation authorizing the transfer of utility systems does not contain procedures concerning the provision of electric service by utility companies. The legislation only contains requirements relating to the transfer of utility systems.

The wording of DRID No. 49 provides evidence that the DoD confused this distinction. The language subjecting utility transfers to state law resembles the language contained in the legislation and regulations governing the acquisition of electric utility service.[70] The key difference is that installations are required to comply with state law when acquiring electric utility service-- not when transferring utility systems.

A second reason for the interpretation likely stems from the statute's wording. The portion of the statute addressing the type of "consideration" the departments may receive for a utility system raises the applicability of state law.[71] Specifically, the section allows an offeror to structure its proposal to provide a "reduced rate" for electric utility service. If offering a reduced rate, the offeror must obtain any *necessary* regulatory approval from the *state* or federal body regulating such service.[72] This requirement, however, only applies if the offeror proposes to *reduce* the cost of utility service, and the service is

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[69] *Compare* 10 U.S.C. § 2688 (authorizing the transfer of utility systems) *with* 40 U.S.C. § 481a (1994) (authorizing military installations to acquire electric utility service).
[70] *Compare* DRID NO. 49, *supra* note 35, at 5 (providing that each utility conveyance shall be conducted "in accordance with applicable state and local law") *with* Department of Defense Appropriations Act of for Fiscal Year 1988 § 8093, Pub. L. 100-202 [hereinafter DODAA], implemented by FAR 41.201(d)(1) (providing that utility service shall be acquired in a manner consistent "with state law governing the providing of electric service").
[71] 10 U.S.C. § 2688(c)(1)(B).
[72] *Id.* § 2688(c)(2).

subject to regulation.[73] Assuming both pre-requisites are met, then the rate offered must be approved by the applicable governing agency.

The statute's legislative history does not explain the purpose underlying this requirement.[74] Requiring a regulated entity such as a utility company to obtain regulatory approval before offering a reduced rate for electric service is probably intended to prevent utilities from circumventing the requirements of state law. The effect of a utility escaping the oversight of the public utility commission would be disastrous to the electric rate-setting process.[75] This interpretation is consistent with the presumption that Congress intends to preserve state law when compliance does not interfere or subvert a federal statute or purpose.[76]

The DoD privatization requirement that military departments comply with state and local law is not only inconsistent with the terms of the statute but is also poor public policy. Emphasizing the primacy of state law may limit the ability of military installations to maximize competition when privatizing electric utility systems. Requiring compliance with state law invites state and local legislatures to pass legislation

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[73] *Id.* § 2688(c)(2) (providing "if the utility service proposed to be provided as consideration are subject to regulation by a Federal or state agency, any reduction in the rate charged for the utility services shall be subject to establishment or approval by that agency.").

[74] *See generally* H.R. CONF. REP. NO. 105-340, *supra* note 42, at 858.

[75] The manner by which a public utility establishes its electric rate is a complicated process involving public notice and hearing. Before a utility can alter its rate, it must receive regulatory approval. This process can take several months to more than a year. Electric rates are set by examining the cost to the utility of providing electric service to each customer. The dynamics of the rate-setting process will be altered if a utility is exempt from having its rate approved for service offered to certain customers. For information concerning the rate setting process, *see* LEONARD SAUL GOODMAN, THE PROCESS OF RATEMAKING (1998).

[76] *See generally* Ray v. Atlantic Richfield Co., 435 U.S. 151, 157 (1978).

proscribing how utility systems are to be transferred and, more importantly, the types of entities capable of acquiring an electric utility system.

Legislatures, seeking to protect state utilities from outside interests, could pass laws requiring all transfers of "utility systems" to be made to firms authorized to provide utility service in the state. The effect of such provincial laws would preclude other capable entities from acquiring military electric systems. State utilities would essentially be given a "right of first refusal" to acquire a military utility system.

The language of DRID No. 49 also encourages state and local governments to create laws or interpretations inconsistent with current utility practice and procedure. For instance, DRID No. 49 requires installations to determine whether state or local law *requires* a utility company to "own and operate" a utility system.[77] There is no requirement under any state or federal law requiring utility companies to own private electric utility systems. The case law is replete with examples of electric customers, such as apartment complexes and private shopping centers, owning and operating electric systems without utility interference.[78] The suggestion that state law *may require* a utility to operate an electric system will invite such determinations from state and local governments.

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[77] DRID NO. 49, *supra* note 35, at 5.

[78] *See generally* City of Oakland v. Pacific Gas & Elec. Co., 754 F.2d 1378 (9th Cir. 1985); Almeda Mall v. Houston Lighting & Power Co., 615 F.2d 343 (5th Cir. 1980); City of Palm Springs, 76 FERC 61, 127 (1996); and Power Clearinghouse v. Public Util. Comm'n of Texas, 968 S.W.2d 537 (Texas 1998). These cases involve issues relating to the extent to which ownership and operation of a utility system entitles the owner to wholesale electric utility service. *See infra* notes 121-126 and accompanying text for a discussion of this issue. These cases are cited to show that entities, such as apartment complexes and department stores, routinely own and operate electric utility systems.

What little legislative history exists supports the notion that Congress intends the military departments to ensure the maximum possible competition when transferring military utility systems. Before voting on the final bill, Senator Frank Murkowski (R-AK) remarked:

> There is nothing in the plain language of the section which in any way supports the notion that a particular purchaser (either a municipal, private, regional, district or cooperative utility) should be given any particular preference with respect to the purchase of military base utility assets. Indeed, the section is intended to create a level playing field for all to compete for the purchase of the facilities.[79]

E. Privatization of Utility Systems- An Alternate Interpretation

Absent a specific statutory requirement, the DoD should not concede that state or local law applies to transfers of utility systems to the private sector. Applying state law could limit the number of firms capable of acquiring and operating a utility system. Congress gives the DoD the discretion to create terms and conditions to protect the government interest when privatizing installation utility systems.[80] The DoD should take advantage of this authority by creating procedures that benefit the department's long term economic interests. In privatizing a utility system, the DoD should permit any contractor capable of operating and maintaining an electric system to compete for the transfer. This ensures that military departments receive the best terms concerning quality of service and economic value when transferring utility assets.

In structuring its privatization procedure, the DoD should encourage competition from both utility companies and from commercial firms specializing in energy services

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[79] 143 CONG. REC. S11815 (daily ed. Nov. 6, 1997) (statement of Sen. Murkowski).
[80] 10 U.S.C. § 2688(f).

and conservation. Today, a host of firms offer electric system operations and maintenance support as well as energy conservation services.[81] Expanding competition to encompass these companies allows the department to combine other energy-related requirements as part of the transfer of its electric utility system. These other requirements are described in the following chapter.

[81] *See* Ray Pospisil, *Power Packaging,* ELECTRICAL WORLD, Mar. 1997, at 26.

III. Overview of Military Installation Energy Requirements

A panoply of federal laws control the acquisition and management of electric energy on military installations. In addition to privatizing its electric utility system, each installation must (1) purchase electric utility service, (2) reduce energy consumption, and (3) find ways to use renewable technologies and energy sources.[82] As will be shown, each requirement logically relates to the other. For instance, an installation buys less electricity from its utility supplier if energy consumption is reduced through conservation measures. The use of renewable technologies has the same effect.

Although related, there is little attempt by military installations to integrate these requirements into one contract. The current practice is for installations to procure each separately.[83] The fact that different statutes govern each requirement may contribute to the perception that separate contracts are required or favored. The following section describes each installation energy requirement, its statutory basis, as well as DoD implementing instructions and guidance.

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[82] This article discusses each requirement in detail. *See infra* notes 84-126 and accompanying text for a discussion of electric utility service. *See infra* notes 127-148 and accompanying text for a discussion of the requirements relating to energy reduction and conservation. Notes 149-187 *infra* and accompanying text discuss use of renewable technologies and energy sources.

[83] In most cases, a military installation contracts for electric service with a utility company. A separate contract is then negotiated for energy conservation services with a company specializing in energy conservation and reduction. Renewable technologies are obtained either from an energy services company or from a different contractor. *See* UTILITY CONTRACTING GUIDE, *supra note* 9 (explaining the different types of contracts installations use to obtain electricity and energy conservation technologies).

A. Buying Electricity: DoD Acquisition of Electric Utility Service

Arguably, acquiring electric utility service is the most complex installation energy requirement. This is due primarily to the regulated nature of the electric utility industry.[84] As will be explained, installations must comply with both federal and state law when contracting for electric service.[85] This dual regulation results in arcane rules that not only limit the installation's ability to obtain competitive electricity, but also its ability to define and structure its electric requirement. These limitations are magnified by the way installations currently contract for electric service.

The objective of each military installation is to receive reliable electric service at the cheapest cost.[86] Installations receive electric service in one of two ways. First, installations can obtain electricity through the General Services Administration (GSA).[87] The GSA has statutory authority to purchase electricity for federal facilities, including those operated by the DoD.[88] The GSA purchases electricity from utility companies

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[84] For a description of how utilities are regulated at the state and federal level, *see* DEPARTMENT OF ENERGY, THE CHANGING STRUCTURE OF THE ELECTRIC POWER INDUSTRY (1996). *See also* NATIONAL CONSUMER LAW CENTER, ACCESS TO UTILITY SERVICES §1.4.2.3 (Supp. 1996).

[85] *See* PROCUREMENT FROM MOST ECONOMICAL SOURCE, *supra* note 5 (providing a history of how the DoD buys electric utility service).

[86] FAR 41.201(a).

[87] FAR 41.103.

[88] "The Administrator shall, in respect of executive agencies, and to the extent that he determines that so doing is advantageous to the Government in terms of economy, efficiency, or service, and with due regard to the program activities of the agencies concerned ... procure and supply personal property and non-personal services for the use of executive agencies in the proper discharge of their responsibilities, and perform functions related to procurement and supply as those mentioned above ...provided that contracts for public utility services may be for periods not exceeding ten years..." 40 U.S.C. § 481(a).

through "area-wide contracts."[89] Although referred to as a "contract," the area-wide is actually a basic ordering agreement (BOA).[90] The GSA negotiates these agreements on a sole source basis with the utility company holding the service franchise for a given area.[91] Area-wide agreements contain mandatory Federal Acquisition Regulation (FAR) provisions and standard conditions relating to utility service. A contract is formed between the GSA and the utility when an installation completes a form requesting utility service.[92] Area-wide contracts can extend up to ten years, although installations can contract for lesser terms.[93]

Strict provisions of the area-wide agreement offer little flexibility in the way installations receive electric service.[94] The agreement provides that the utility will charge an electric rate approved by its governing body.[95] This rate, called a tariff, is based on

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[89] GENERAL SERVICES ADMINISTRATION, AREA-WIDE UTILITY CONTRACTS LISTING (1997). As the name implies, these agreements cover specific geographic territories throughout the United States. The GSA maintains a page on the World Wide Web providing extensive information on area-wide agreements. For a list of the most current agreements, *see Area-Wide Contracts* (last modified Dec. 9, 1998) <http://www.gsa.gov/pbs/areawide.htm>.

[90] *See* FAR 16.703. A Basic Ordering Agreement (BOA) is negotiated between an agency and a contractor. A BOA contains provisions and terms that apply to future contracts. A contract is formed when an agency places an order against the BOA.

[91] State law regulates electric service provided by utility companies. The state public utility commission, the body responsible for regulating utility service within a state, assigns each utility a service "franchise" area. These franchise areas are specific geographic regions within the state. In return for a franchise, the utility is required to provide electricity to all customers requesting service. *See generally* Richard L. Fanyo, *State Jurisdiction and Retail Wheeling*, 4-11 ROCKY MTN. MIN. L. INST. 5 (1996).

[92] *See* FAR 41.204(c)(2) (the form used to order service from a utility is called a service authorization).

[93] 40 U.S.C. § 481(a)(3).

[94] UTILITY CONTRACTING GUIDE, *supra* note 9, at 87.

[95] FAR 41.204(b)(1). Three types of utilities provide electric service to the public. They are municipal utility companies, publicly owned electric companies, and rural electric cooperatives. Each is regulated differently. Municipal utilities are regulated by city council. Publicly owned utilities are regulated by the state public utility commission.

the amount of electricity a customer consumes.[96] For military installations, the utility determines which tariff to apply by examining the installation's size and past electric consumption.[97] Tariffs generally allow consumption to vary within a specified range. For example, a tariff may specify a rate for each kilowatt-hour[98] of electricity based on the consumption of between 50,000 to 200,000 kilowatt-hours.[99] Most tariffs allow the utility to impose additional charges if consumption differs from the range specified in the tariff.[100] In other words, installations can be penalized for using too much or too little power.[101]

Rural electric cooperatives are consumer owned. As such, the owners establish the rates and terms of utility service. Electric cooperatives are also subject to state and federal law. *See* Lynn R. Coleman & Mathew W.S. Estes, *State Utility Commission Regulation of Energy Transactions, in* ENERGY LAW AND TRANSACTIONS § 4.01-02 (David J. Muchow & William A. Mogel eds., 1998) (providing a description of how electric utility service is regulated at the state level).

[96] *See* UTILITY CONTRACTING GUIDE, *supra* note 9, at 145. A tariff is a collection of rates and conditions applicable to utility service.

[97] *Id.* at 87.

[98] A kilowatt-hour is a measure of electric energy used by an electric circuit for one hour. *See* DEPARTMENT OF ENERGY, TECHNIQUES FOR ANALYZING THE IMPACTS OF CERTAIN ELECTRIC UTILITY RATEMAKING AND REGULATORY POLICY CONCEPTS 60 (1980).

[99] UTILITY CONTRACTING GUIDE, *supra* note 9, at 87.

[100] *Id.* at 88. In theory, the Federal Acquisition Regulation (FAR) Variation in Estimated Quantity Clause could be used to address changes in the consumption of electricity. This clause provides that if the actual quantity consumed varies by more than fifteen percent of what had been estimated, either party can demand an equitable adjustment in the contract price. The clause is not used in government utility contracts because the rates, and specific terms and conditions of service, are established and regulated by the utility's governing body. *See* FAR 52.211-18.

[101] UTILITY CONTRACTING GUIDE, *supra* note 9, at 88. Utility companies benefit from this pricing method because it allows the utility to plan electric purchases without having to acquire or produce additional generation which a customer may or may not use. In other words, the penalty provision motivates customers to keep consumption within the range specified in the tariff. The penalty compensates the utility when consumption differs and the utility is forced to procure additional generation. Largely because of deregulation, utilities now offer a variety of different rate packages. As states begin the move toward electric deregulation, it is likely utilities will drop these penalty provisions

A military installation located within a region covered by an area-wide agreement is required to take service under that agreement.[102] However, the installation has authority to negotiate other provisions relating to the rates, terms, or conditions of service without GSA notice or assistance.[103] Because electric utility service is highly regulated, however, most utilities are unwilling to negotiate any provision affecting the rate approved by the governing regulatory body.[104]

A second way installations receive electric service is by negotiating a contract with a utility supplier.[105] The Armed Services Procurement Act (ASPA) gives the DoD authority to contract for utility service.[106] Installations contract with utility suppliers in cases where an area-wide agreement is not available or where the head of the contracting activity determines that the area-wide is not in the installation's best interest.[107] Installations also contract in cases where more than one utility is capable of providing electric service.[108] Under these circumstances, the FAR requires the installation to compete its electric requirement.[109] However, a congressional restriction significantly

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if a customer's electric consumption exceeds the amount specified in the tariff. *See infra* notes 123-126 and accompanying text for a discussion of electric deregulation.

[102] FAR 41.204(c)(1).

[103] FAR 41.204(b)(1). For instance, the utility could agree to establish and seek approval of a "military" rate or some other rate specific to the installation.

[104] UTILITY CONTRACTING GUIDE, *supra* note 9, at 64.

[105] *See* 40 U.S.C. § 474 (1994) (providing that "nothing in this Act shall impair or affect any authority of any executive agency named in the Armed Services Procurement Act of 1947, and the head thereof, with respect to the administration of Said Act...").

[106] Armed Services Procurement Act of 1947, Pub. L. No. 80-413, 62 Stat. 21 (codified as amended in scattered sections of 10 U.S.C.).

[107] FAR 41.204(c)(1)(ii).

[108] FAR 41.204(c)(1)(i).

[109] FAR 41.204(c)(1)(ii).

hinders installation contract authority and effectively prevents the installation from obtaining competitive electric service.

The DoD Appropriations Act of 1988,[110] the terms of which apply to subsequent fiscal years, requires installations to comply with state law when contracting for electric service.[111] State law governs the sale of electricity to retail customers.[112] A retail electric customer is one who buys electricity for its own consumption.[113] Under state law, retail customers must buy electricity from the utility holding the service franchise for the

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[110] *See* DODAA FY 88, *supra* note 70, § 8093 (providing that "none of the funds appropriated or made available by this or any other Act with respect *to any fiscal year* may be used by any Department, agency, or instrumentality of the United States to purchase electricity in a manner inconsistent with state law governing the provision of electric utility service, including state utility commission rulings and electrical utility franchises or service territories..." (emphasis added). This requirement is also incorporated into the FAR. *See* FAR 41.201(d)(1).

[111] There has been considerable debate concerning the Constitutional validity of this requirement. *See* West River Elec. Assoc. v. Black Hills Power and Light Co., 918 F.2d 713, 717 (8th Cir. 1990). In this case, the court of appeals held the requirement to be inapplicable to installations which are "federal enclaves." To defer jurisdiction over a federal enclave, the court held that Congress must make its intent explicit. The court found that section 8093 was not specific, and therefore not sufficient to enable the South Dakota Public Utility Commission to regulate the activities of Ellsworth Air Force base. The court further held that the act's restriction cannot negate the clear intent of the Competition in Contracting Act, Pub. L. No. 98-369, 98 Stat. 1175 (1984), which generally requires federal agencies to acquire goods and services through a competitive process. The court found that while Congress can amend legislation through an appropriation act, "it is well settled that indefinite congressional expressions cannot negate plain statutory language and cannot work a repeal or amendment by implication." The DoD has not used this case as precedent to obtain electricity on a competitive basis. One reason for DoD's inaction is that even if the government competes its electric requirement, military installations will have to obtain permission from the local utility to use its distribution lines to access competitive electricity. The DoD has been unwilling to seek either a court order or an order from the applicable regulatory body to require such access. For an extensive discussion of this issue, as well as other DoD impediments to competitive power, *see* PROCUREMENT FROM MOST ECONOMICAL SOURCE, *supra* note 5.

[112] NATIONAL CONSUMER LAW CENTER, *supra* note 84, at §1.4.2.3.

[113] 16 U.S.C. § 824k(h) (1994).

customer's geographic region.[114] Courts and regulatory bodies have held that military installations are retail customers and, therefore, must obtain service from the state franchised utility.[115] As with the GSA area-wide agreement, state law requires the installation to receive service under an approved tariff.

State law clearly applies when an *installation* buys electric utility service. However, different rules govern if a third party, such as a contractor, obtains electricity and resells it to an installation. A party selling electricity to another qualifies as a "wholesale" transaction and is governed exclusively by federal law.[116] Under federal law, the terms and conditions of wholesale electric sales are established and regulated by the Federal Energy Regulatory Commission (FERC).[117] In 1996, FERC issued Order 888 requiring utility companies to provide access to transmission[118] lines for parties engaging in wholesale electric transactions.[119] As a result, this Order provides for competition in the

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[114] Coleman & Estes, *supra* note 95, § 4.02[3][f].

[115] In challenging this determination, installations have unsuccessfully argued that electricity is "sold" to various tenant organizations within the confines of the installation. Installations argue that such a transaction is a "wholesale" transaction and is therefore subject to federal law. *See generally* PROCUREMENT FROM MOST ECONOMICAL SOURCE, *supra* note 5, at 2 (explaining how military departments unsuccessfully challenged the "retail" determination made by courts and utility commissions).

[116] *See* 16 U.S.C. § 824(d) (defining a wholesale electric transaction to be any sale of electric energy to a party or entity which in turn sells the electricity to a third party).

[117] 42 U.S.C. § 7172(a) (1994). *See also* Arkansas Elec. Coop. v. Arkansas Pub. Serv. Comm'n., 461 US 375, 378 (1983) (holding that rates charged in wholesale electric transactions are governed by the Federal Energy Regulatory Commission (FERC) under federal and not state law).

[118] Electric service consists of three components: generation, transmission, and distribution. Generation refers to the production of electric energy. Transmission refers to the transfer of electricity across high voltage lines to a point of distribution. Distribution refers to the delivery of electric power to end-users. *See* JOSEPH P. TOMAIN ET AL., ENERGY LAW AND POLICY 445 (1989).

[119] Order No. 888, Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, 61 Fed. Reg. 21, 540 (May 10, 1996).

wholesale power market. Electricity bought at wholesale is usually cheaper than electricity bought from utilities under retail tariffs.[120]

B. Obtaining Access to the Wholesale Electric Market Through Privatization

The privatization of electric utility systems allows an installation to structure its electric requirement in a way that enables access to wholesale electricity. For instance, if the contractor acquiring the electric system is also responsible for supplying the installation with electric power, then the contractor can obtain access to electricity sold at wholesale.[121] Such a transaction is a "sale for resale" because the contractor obtains electricity for the purpose of reselling it to the installation.[122]

The distinction between wholesale and retail electricity becomes moot when a state deregulates its electric utility industry. Currently, states are either studying deregulation or are in the process of deregulating the electric utility market.[123] The generally excepted notion is that competition among electric suppliers will lower utility rates for consumers. While not all share this view, competition will certainly allow retail electric customers to choose among competing electric suppliers.[124]

Some may argue that installations should wait for deregulation rather than structuring a requirement in a way that enables installations to obtain access to wholesale electricity. However, waiting for a state to deregulate is a mistake. Electric deregulation is and will

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[120] PROCUREMENT FROM MOST ECONOMICAL SOURCE, *supra* note 5, at 9.
[121] The advantages of wholesale access are more fully explored *infra* Part IV.B.
[122] *See supra* note 116 and accompanying text.
[123] *See* NATIONAL CONSUMER LAW CENTER, *supra* note 84, at § 1.5.1.
[124] For views on the effect of electric competition in retail markets, *see generally,* Michael Baly III et al., *The U.S. Energy Industry, in* ENERGY LAW AND TRANSACTIONS §1.04 1-13 (David J. Muchow & William A. Mogel eds., 1998); DEPARTMENT OF

continue to be a slow process. Because of complex issues involving "stranded costs,"[125] most customers will not experience a reduction in utility rates for some time.[126] Combining energy requirements, as this thesis advocates, provides installations the ability to access the wholesale power market, and cheaper electricity, much faster than if the installation waits for electric deregulation.

C. Energy Conservation and Use of Renewable Energy and Technologies on DoD Installations

National energy policy has been described as kaleidoscopic in nature because most laws were enacted to respond to world or national events.[127] This reactionary approach to policy is particularly evident when examining laws relating to energy conservation and renewable technologies. Since the 1970s, Congress passed a series of laws requiring the creation of programs to assist federal agencies in reducing energy consumption or to explore the use of renewable technologies.[128] Most laws created programs administered

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ENERGY, THE CHANGING STRUCTURE OF THE ELECTRIC POWER INDUSTRY: SELECTED ISSUES (1998); and NATIONAL CONSUMER LAW CENTER, *supra* note 84, at § 1.5.1.

[125] "Stranded costs" is a complex theory utility companies use to recoup capital expenditures made in fulfilling the regulatory obligation to provide service to those within franchise territories. The utilities argue that a change in the law allowing customers to switch to another electric provider is a "taking of property" by the state in violation of the Constitution. This issue is the subject of intense debate in states considering electric deregulation. For an in-depth discussion of stranded costs, *see* William J. Baumol & J. Gregory Sidak, *Stranded Costs*, 18 HARV. J.L. & PUB. POL'Y 835 (1995).

[126] THE CHANGING STRUCTURE OF THE ELECTRIC POWER INDUSTRY: SELECTED ISSUES, *supra* note 124, at 27.

[127] Joseph P. Tomain, *The Dominant Model of United States Energy Policy*, 61 U. COLO. L. REV. 355 (1990).

[128] For a comprehensive list of legislation dating back to the early 1930s, *see* Hank Schilling, *Energy Efficiency, in* SUSTAINABLE ENVIRONMENTAL LAW § 10.1 (Celia Campbell-Mohn et al. eds., 1993).

by the Department of Energy (DOE) to assist agencies in meeting a particular energy requirement, while others were passed as part of agency appropriations bills. Given the way these laws were passed, it is not surprising that many statutes contain overlapping requirements or address the same or similar subject area. Energy conservation and the use of renewable technologies offers such an example.

1. Energy Conservation Requirements on DoD Installations[129]

DoD energy conservation requirements are based on two laws: The National Energy Conservation Policy Act of 1978 (NECPA)[130] and The Energy Policy Act of 1992 (EPACT).[131] NECPA is the cornerstone of energy conservation policy. This Act recognizes that federal agencies can reduce energy consumption by improving the design, operation, and maintenance of buildings.[132] To reduce energy consumption, NECPA requires agencies to install conservation measures in federal buildings.[133] The term "measure" means anything which "improves the energy efficiency" of a building and is life-cycle cost effective.[134] The Act lists "solar technology," "renewable energy sources," and "maintenance and operating procedures" as examples of measures which can be used to reduce energy consumption.[135]

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[129] This thesis examines energy conservation only as it relates to electric energy.
[130] Pub. L. No. 95-619, 92 Stat. 3206 (1978) (codified as amended in scattered sections of 12, 15 & 42 U.S.C.).
[131] Pub. L. No. 102-486, 106 Stat. 2776 (1992) (codified as amended in scattered sections of 2, 11, 15, 16, 25, 26, 31, 31, 33, 42 & 48 U.S.C.).
[132] 42 U.S.C. § 8251 (1994).
[133] 42 U.S.C. § 8253.
[134] *Id.* § 8253(a). *See* Methodology and Procedures for Life Cycle Cost Analyses, 10 C.F.R. § 436 (1994) (containing DOE life cycle costing procedures).
[135] 42 U.S.C. § 8259(4).

As originally enacted, NECPA required energy conservation measures to be installed in every federal building.[136] This requirement proved unattainable given the number of federal buildings coupled with the lack of agency funding for such projects.[137] Recognizing this, Congress amended NECPA through the Federal Energy Management and Improvement Act of 1988 (FEMIA).[138] FEMIA, which left NECPA largely intact, required agencies to reduce energy consumption by ten percent between the years 1985-1995.[139]

Congress again amended NECPA in 1992 with the passage of EPACT.[140] EPACT extends the time period for compliance and increases the amount of energy agencies must conserve. Specifically, EPACT requires agencies to reduce energy consumption by twenty percent by the year 2000.[141] In addition, any installed conservation measure must have a payback period of ten years or less.[142]

To speed the pace of energy conservation at federal facilities and to ensure agencies meet the requirements and deadlines specified in NECPA, President Clinton signed

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[136] National Energy Conservation Policy Act, § 547 (current version located at 42 U.S.C. § 8253).
[137] H.R. REP. NO. 100-684, 100th Cong., 2nd Sess., at 2 (1988), *reprinted in* 1988 U.S.C.C.A.N. 4322 (indicating the lack of progress by federal agencies in reducing energy consumption).
[138] 42 U.S.C. §§ 8251-8261 (1994).
[139] *Id.* § 8253(a)(1). Whether the government met this requirement is subject to debate. As a whole, the government did reduce energy consumption by fourteen percent between the years 1985-1995. However, ten agencies were unable to meet the requirement. Some groups criticize the manner by which the government measures its energy successes. For a discussion of this issue, *see* Joe W. Loper et al., *Improving Energy Productivity in Federal Government Facilities,* ALLIANCE TO SAVE ENERGY (1998).
[140] Energy Conservation Policy Act of 1992, 106 Stat. 2776.
[141] 42 U.S.C. § 8253(a)(1).
[142] *Id.* § 8253(b).

Executive Order (EO) 13,123.[143] EO 13,123 increases the amount of energy agencies are to conserve by requiring a thirty percent reduction in energy use by the year 2005.[144] By 2010, agencies must reduce energy consumption by thirty-five percent. The Order also requires agencies to reduce energy consumption in industrial facilities by twenty percent by 2005 and twenty-five percent by 2010.[145]

An underlying theme of NECPA is the broad discretion agencies have to reduce energy consumption. NECPA lists only examples of ways agencies can reduce energy. It does not mandate the use of any particular contract nor does it specify which measures are to be used to reduce energy consumption. EPACT is also broadly worded and does not require specific technologies or specify how agencies are to reduce energy consumption. The legislative history of EPACT suggests Congress intends agencies to find unique and creative alternatives to reduce energy consumption at federal facilities.[146]

Similarly, EO 13,123 provides discretion to agencies in reducing energy consumption. The Order encourages agencies to use different energy management strategies and tools to increase energy efficiency and reduce consumption.[147] While the Order provides discretion to agencies in developing an overall energy strategy, the Order does require agencies to incorporate renewable technologies and energy sources as part of its overall

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[143] Exec. Order No. 13,123, 64 Fed. Reg. 30851 (June 3, 1999). This Executive Order revokes Executive Order 12,902, 59 Fed. Reg. 11,463 (March 8, 1994) which contained requirements relating to energy conservation.
[144] *Id.* § 301(a).
[145] *Id.* § 301(b).
[146] H.R. CONF. REP. NO. 102-1018, 102nd Cong., 2nd Sess., at 386 (1992), *reprinted in* 1992 U.S.C.C.A.N. 2472, 2477 (indicating the need to alter existing contracting regulations to permit agencies to maximize energy savings at federal installations).
[147] Exec. Order No. 13,123 § 403.

program to reduce energy consumption.[148] The following section explores renewable energy requirements.

2. Acquisition of Renewable Technologies and Electric Energy

a. Background

Renewable energy is defined as electricity produced from geothermal,[149] photovoltaic,[150] hydro,[151] wind,[152] or similar technology. As a resource, electricity produced from these technologies is more abundant than electricity produced from facilities relying on fossil fuels such as coal or natural gas.[153] In terms of public policy, renewable technologies are favored because they produce little or no pollution and rely on inexhaustible natural resources as fuel for electric generation.[154] This section examines DoD requirements relating to the use of renewable energy. As described, these requirements derive from statutes as well as executive order and policy.

A common theme found in statutes addressing renewable energy is an emphasis on the acquisition of renewable "technology." Renewable technology is equipment that produces or utilizes energy from resources such as geothermal or solar energy.[155] These

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[148] *Id.* § 204.

[149] *See* NATIONAL RENEWABLE ENERGY LABORATORIES, RENEWABLE ENERGY: A GUIDE TO THE WORLD OF ENERGY CHOICES 19 (1998) [hereinafter NREL] (geothermal energy is produced from the heat of molten rocks below the Earth's surface. The heat from these rocks heats underground reservoirs. Geo-thermal technologies harness energy produced from these heated water sources).

[150] *Id.* at 11 (photovoltaic, commonly referred to as "solar energy," are cells that convert sunlight into electricity).

[151] *Id.* at 1 (hydropower is electricity produced from the flow of rivers).

[152] *Id.* at 18 (wind power is electricity produced from generators powered by windmills).

[153] *Id.* at 3. Because renewable energy is produced from unlimited energy sources, e.g. the sun and wind, it is more abundant than energy produced from fossil fuels.

[154] *Id.* at 1.

[155] *See* DEPARTMENT OF ENERGY, RENEWABLE ENERGY PROGRAM (Aug. 1996) (providing a description of various types of renewable energy technologies).

technologies either improve building energy efficiency or actually generate electric power. Technologies that increase building energy efficiency include geo-thermal heat pumps[156]and passive solar designs.[157] Technologies that generate electricity include photovoltaic panels,[158] wind generation systems,[159] and fuel cells.[160]

Renewable technology must be contrasted with electricity produced by utility companies from renewable generation sources. Many utilities offer customers the opportunity to receive electricity produced from generation plants producing electricity from solar or wind sources.[161] Service under these tariffs is usually more expensive than standard utility service.[162] As will be shown, statutes addressing renewable energy only require DoD installations to acquire renewable technologies. They do not require installations to buy "renewable" electricity generated by utilities. Executive order, however, now requires agencies to examine ways to increase the use of electricity produced by utility companies from renewable energy sources.[163]

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[156] *See* NREL, *supra* note 149, at 20 (geothermal heat pumps use ground temperature, which remains stable throughout the year, as a source of heat during the winter. In the summer, geothermal pumps cool facilities by depositing heat into the ground).
[157] *Id.* at 2 (referring to a building design that takes advantage of solar energy. Examples of solar design include special windows and insulation that improve energy efficiency).
[158] *Id.* at 6 (photovoltaic panels convert sunlight into electricity).
[159] *Id.* at 18 (wind power is electricity produced from generators powered by windmills).
[160] A fuel cell changes chemical energy into electricity without using a combustion stage. A fuel cell is similar to a large battery. The cell produces direct current (DC) power using an electrochemical process. For a further description of fuel cells, *see generally* DEPARTMENT OF DEFENSE, REPORT TO CONGRESSIONAL DEFENSE COMMITTEES ON THE UTILIZATION AND DEMONSTRATION OF FUEL CELLS (Aug. 1998).
[161] Blair G. Swezey, *Utility Green Pricing Programs: Market Evolution or Devolution?*, SOLAR TODAY, Jan/Feb 1997, at 22.
[162] W.W. Wyatt Gibbs, *Change in the Wind*, SCI. AM., Oct. 1997, at 162 (indicating a twenty-percent increase in energy cost is not uncommon under renewable tariffs).
[163] Exec. Order No.13,123 § 404. *See infra* notes 182-183 and accompanying text describing this requirement in greater detail.

In general, the laws relating to the acquisition of renewable technologies are disjointed and lack consistency. The United States Code is littered with unfunded mandates, many of which remarkably remain on the books, concerning renewable technologies.[164] Most of these statutes authorized programs or demonstration projects to increase the use of renewable technologies among federal agencies.[165]

The statutes, described below, applicable to the DoD addressing renewable technologies also lack consistency. As will be explained, different rules apply to the use of renewable technologies in DoD buildings and facilities. For new construction projects, the DoD can increase construction costs to accommodate renewable energy technologies.[166] However, no similar provision exists if the DoD modifies an existing building or facility.

b. Statutory Basis for DoD Renewable Acquisitions

Two statutes require DoD installations to obtain renewable technologies for installation in buildings. The first applies to existing facilities while the other pertains to new construction. For existing facilities, installations must acquire "energy systems" using "solar and other renewable forms of energy."[167] The term "system" is not defined, but a plain reading of the section suggests the statute addresses systems internal to the building's operation. Examples of internal energy systems include heating and air

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[164] A thorough review of the U.S. Code can be a frustrating experience for practitioners attempting to locate the current authority agencies use to procure renewable energy technologies. Dozens of laws remain on the books but receive no annual funding from Congress. *See* Schilling, *supra* note 128 (containing a list of historical energy laws, many of which remain in the U.S. Code).

[165] *Id.*

[166] 10 U.S.C. § 2857 (1994).

[167] 10 U.S.C. § 2394(a) (1994). This section was added as part of the Military Construction Act of 1983, Pub. L. No. 97-321, 96 Stat. 1549 (1982).

conditioning units, boilers, and chillers.[168] Any installed system must be cost effective[169]using the life-cycle costing procedures specified in NECPA.[170]

The second requirement applies to new construction.[171] Specifically, the section requires the design of new facilities to include solar and renewable energy systems where the system "has the potential" to reduce energy costs.[172] Given this loose requirement, it seems installations must always factor such technologies into the design of new facilities because all renewable energy systems have the "potential" to reduce energy costs.

Once a project is designed, the installation must install the technology in the facility if determined to be cost effective.[173] Like the requirement for existing facilities, the term "system" is not defined but presumably means fixtures internal to the operation of the building. Unlike the statute for existing facilities, the Secretary of Defense has authority to increase construction costs to install renewable energy systems in new buildings and facilities.[174]

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[168] *See generally* DEPARTMENT OF ENERGY, GREENING FEDERAL FACILITIES (1997) (describing energy systems found in federal buildings).
[169] 10 U.S.C. § 2394(c)(2) (cost effective is defined as the difference in cost between the renewable energy system and the original cost of the system using non-renewable energy. If the difference can be recovered over the life of the new system, then it is considered to be cost effective).
[170] *See* 10 C.F.R. § 436 (containing the DOE life cycle costing procedures).
[171] 10 U.S.C. § 2857. This section was added as part of the Military Construction Codification Act, Pub. L. No. 97-214, 96 Stat. 153 (1982).
[172] *Id.* § 2857(b)(1).
[173] *Id.* § 2857(c)(1) (cost effective is the difference in cost between the renewable energy system and the original cost of the system using non-renewable energy. If the difference can be recovered over the life of the new system, then it is considered cost effective).
[174] *Id.* § 2857(d). Neither the legislation nor its legislative history explain why the Secretary can increase construction costs of new buildings and facilities but not for modifications to existing structures. If the policy is to reduce energy through use of renewable technologies, then Congress should authorize and encourage installations to increase the cost for modifications and upgrades to existing facilities to accommodate such technologies. Because each requirement was passed by separate legislation, it is not

The DoD has produced little to implement these two requirements.[175] The DoD did issue Defense Energy Program Policy Memorandum (DEPPM) 88-2 to "encourage" military departments to contract with the private sector for energy projects in existing facilities.[176] This DEPPM requires projects to be life-cycle cost effective using procedures contained in the memorandum. The memorandum does not establish goals or mandates concerning the number of renewable energy projects military departments must pursue.

Defense Energy Program Policy Memorandum (DEPPM) 88-1 implements the requirement for renewable systems for new construction projects.[177] This memorandum requires military departments to evaluate renewable forms of energy when planning and constructing new facilities. The DEPPM also contains the life-cycle costing procedure departments are to use in planning projects and authorizes increased construction costs for renewable technologies.

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surprising an inconsistency exists. *See generally* H.R. REP. NO. 612, 97TH Cong., 2nd Sess., at 27, *reprinted in* 1982 U.S.C.C.A.N. 441, 467.

[175] EO 13,123, signed in June of 1999, imposes requirements relating to the installation of renewable energy technologies in new construction projects as well as to existing facilities and buildings. These requirements are discussed in the following section. Because EO 13,123 is a recent order, it is likely the DoD will modify or revise its DEPPMs to incorporate the requirements of the Order.

[176] DEPARTMENT OF DEFENSE, DEFENSE ENERGY POLICY MEMORANDUM 88-2, PRIVATE SECTOR FINANCED ENERGY CONTRACTS (1988).

[177] DEPARTMENT OF DEFENSE, DEFENSE ENERGY POLICY MEMORANDUM 88-1, DEFENSE FACILITIES ENERGY SELECTION (1988). In planning for the construction of new facilities, the military departments consult a technical instruction issued by the Army Corps of Engineers. Currently, *see* UNITED STATES ARMY CORPS OF ENGINEERS, TECHNICAL INSTRUCTION 800-01-DESIGN CRITERIA (1998). This instruction establishes the standards and criteria for energy conservation and renewable designs for new facilities. The instruction explains how installations should factor these systems into the design of new facilities.

c. Executive Order and Policy for Renewable Technology and Energy

Military installations have additional requirements relating to renewable energy imposed by executive order. EO 13,123 requires the DoD to expand the use of renewable technologies in buildings and facilities on military installations.[178] Before installing renewable technologies, the DoD must first conduct an energy survey of each installation or facility.[179] The survey identifies buildings most in need of renewable technologies and conservation measures.

The Order requires agencies to "optimize" the use of renewable energy technologies and systems when constructing new facilities or when modifying older buildings and structures.[180] By way of example, the Order lists fuel cells, wind generation systems and technologies relying on solar power as types of renewable systems agencies shall consider when constructing or modifying buildings or facilities.[181]

The EO also requires federal agencies to "strive" to increase the use of solar and other renewable energy produced from utility companies.[182] The Order specifies that agencies should include provisions for buying renewable electricity as part of its utility service contract.[183] The EO does not specify how much renewable electricity agencies are to acquire.

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[178] Exec. Order No. 13,123 §204. This requirement is independent of the statutory requirements relating to the installation of renewable technologies in DoD buildings and facilities.
[179] *Id.* § 402. The Order requires agencies to conduct energy audits for installations and facilities.
[180] *Id.* § 403(g). Installation of such systems must be life cycle cost effective as determined by the procedures set forth in 10 C.F.R. 436.
[181] *Id.* § 403(b)(3).
[182] *Id.* § 404(c).
[183] *Id.* § 404(c)(1).

A Presidential memorandum to executive agencies also encourages agencies to increase the use of renewable electricity by installations and facilities.[184] The memorandum, addressed to the heads of executive agencies, directs agencies to "propose ways to procure electricity produced using cost-effective renewable sources."[185] Recently, the DOE, GSA, and the Environmental Protection Agency (EPA) signed a Memorandum of Understanding addressing renewable energy.[186] The Memorandum provides that each agency will "encourage" other agencies to buy electricity generated from renewable energy sources. Shortly after this memorandum was signed, the GSA issued a solicitation seeking proposals from electric providers capable of supplying electricity generated solely from renewable generation sources.[187]

According to James Snook, a member of the Defense Utilities Energy Management Committee,[188] military installations have difficulty acquiring renewable electricity and technologies. First, projects using renewable technologies are expensive. With declining defense budgets, most installations are reluctant to use operations and maintenance funds to install renewable technologies. In addition, recent defense budgets have contained insufficient Minor Military Construction funds for each military installation to implement

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[184] President's Memorandum to the Heads of Executive Departments and Agencies, 34 WEEKLY COMP. PRES. DOC. 1485 (July 25, 1998).
[185] *Id.*
[186] *Id.*
[187] The solicitation is for an area-wide contract. Therefore, the agreement makes renewable electricity available to all federal agencies. The latest information concerning this solicitation is available through the GSA Word Wide Web Site, http://www.gsa.gov/pbs/xu/co1.htm.
[188] *See* DEPARTMENT OF DEFENSE, DEFENSE ENERGY PROGRAM POLICY MEMORANDUM 94-2, ENERGY SAVINGS PERFORMANCE CONTRACTING (1994) [hereinafter DEPPM 94-2]. (containing a description of the Defense Utilities Energy Committee). *See also supra* note 46.

projects using renewable technologies.[189] Second, installations lack incentive to implement projects that save "future" money because any savings will result in less money being appropriated to the installation in future budgets.[190] Third, the goal of obtaining reliable electricity at the cheapest price conflicts with acquiring more expensive renewable electricity.[191]

A recent contract mechanism, however, offers military installations tremendous potential to achieve the requirements described in this thesis without using appropriated funds. The contract is called the Energy Savings Performance Contract.

3. The Energy Savings Performance Contract

Military installations have relied on three funding sources to finance energy conservation measures, including those involving renewable technologies.[192] One source is the installation's Operations and Maintenance (O&M) account. This is the least attractive funding alternative because it reduces the amount of money an installation commander has to fund mission-related activities. A second source of funding is the DOE Federal Energy Efficiency Fund.[193] Under this program, installations

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[189] Snook Interview, *supra* note 46. Minor Military Construction funds are used for projects exceeding $500,000. *See also* Department of Defense, Military Construction Appropriation Act for Fiscal Year 1998, Pub. L. No. 105-45, 111 Stat 1142 (1997). For FY 1998, Minor Military Construction funding for the services were as follows: Air Force, $8,545,000; Army, $7,400,000; and Navy, $11,460,000.

[190] Snook Interview, *supra* note 46.

[191] *Id.* *See also* Gibbs, *supra* note 162, at 146 (noting that the price paid under a renewable electric tariff can be up to twenty percent more expensive than service obtained under traditional tariffs).

[192] DEPARTMENT OF ENERGY, REPORT TO CONGRESS ON FEDERAL GOVERNMENT ENERGY MANAGEMENT AND CONSERVATION PROGRAMS 25 (Feb. 1997).

[193] *Id.* at 27 (providing a description of the DOE Energy Efficiency Fund).

receive grant monies from the DOE to implement conservation projects. Because funding for these grants is limited, the DOE has a process where agency projects compete against one another for grant money. Each year, only a few receive assistance.[194] The third and most recent mechanism to finance conservation projects is through the ESPC.[195]

a. Overview of the ESPC

The ESPC[196] enables military installations to use private sector funding to finance energy conservation projects.[197] The contract is a massive undertaking in that virtually every facet of an installation's energy consumption is affected-- from the smallest electric light to large electric transformers. An overview of the ESPC, both in terms of its purpose and structure, is helpful before examining its specific statutory authority.

Under an ESPC, an energy savings contractor (ESCO) conducts a detailed analysis of an installation's energy use.[198] This audit includes a thorough review of the installation infrastructure, as well as the electrical distribution system.[199] Anything affecting electric

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[194] *Id.* at 28. Since the program's inception in FY 1994, a total of 114 agency proposals were submitted to the DOE for grant funding. These 114 projects totaled $23.6 million, while only $14.8 million in grants were available. Of the 114 projects, only thirty-seven received funding.

[195] *Id.* at 25.

[196] This article discusses the ESPC as it relates to the conservation of electric energy at military installations. In addition to being used by the federal government, state and local governments as well as private industry use the ESPC. ESPCs can also address conservation measures involving water and natural gas. *See generally* SHIRLEY J. HANSEN & JEANNIE C. WEISMAN, PERFORMANCE CONTRACTING: EXPANDING HORIZONS 8 (1998).

[197] *See* 10 C.F.R. § 436.31 (ESPC is defined by the DOE to be a contract which provides for the performance of services for the design, acquisition, installation, testing, operation, and, where appropriate, maintenance and repair of an identified energy conservation measure).

[198] *See generally* ALBERT THUMANN & FRED E. WAINWRIGHT, FINANCING ENERGY PROJECTS DESKBOOK 21 (1997).

[199] *Id.* at 21.

consumption is examined. Once complete, the ESCO issues a report to the installation Contracting Officer recommending specific conservation measures designed to reduce energy consumption. The Contracting Officer, usually with the assistance of an engineer, determines whether to accept or reject the ESCO's recommendations. Assuming the Contracting Officer agrees to the measures, the ESCO acquires, installs, and maintains the devices for the duration of the contract.[200]

The type of conservation measures encompassed under an ESPC typically include installation of energy efficient lights, electric motors, heaters, chillers, and boilers.[201] Equally important are projects relating to the installation's electric distribution system. As the artery that delivers power to buildings, a poorly maintained system significantly reduces the installation's ability to conserve energy. Projects relating to the electric distribution system include improvements to electric transformers and substations as well as improvements to electric power lines and wiring. [202]

Under conventional government contracts, the contractor is paid when the government accepts the equipment or service.[203] In contrast, under the ESPC, payment is based on the level of monetary savings obtained through reduced energy consumption.[204] Savings,

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[200] Steven J. Allenby, *Financing and Delivering Energy Services for the Federal Government,* E-SOURCE, 1996, at 17. The duration of the contract can vary. Installations have authority to contract for energy services for up to twenty-five years. *See discussion infra* note 222 and accompanying text.

[201] REPORT TO CONGRESS ON FEDERAL GOVERNMENT ENERGY MANAGEMENT AND CONSERVATION PROGRAMS, *supra* note 192, at 33.

[202] *See* GREENING FEDERAL FACILITIES, *supra* note 168, at 49 (providing a description of the electrical infrastructure of a typical federal facility and how improvements to that infrastructure result in reduced electricity consumption).

[203] JOHN CIBINIC JR. & RALPH C. NASH JR., ADMINISTRATION OF GOVERNMENT CONTRACTS 833 (Geo. Wash. Univ. 3rd ed. 1998).

[204] *See* HANSEN & WEISMAN, *supra* note 196, at 51. The government is responsible for structuring the contractor's payment schedule. The government determines the length of

which can be adjusted for inflation, are determined by examining the installation's utility bill before and after implementation of the project.[205] If the project does not save money, the ESCO is not paid.[206] Savings are calculated on a monthly basis and are verified annually. After the expiration of the contract, the government retains any cost savings.

The primary purpose of the ESPC is to help agencies fulfill the requirements of EPACT.[207] As such, the contract is designed to reduce energy consumption.[208] This is important to the contractors because they are paid from these savings.[209] The less energy a facility consumes generally corresponds to a reduction in the amount spent on utility service. In theory, the ESPC is cyclical in that energy reduction fuels cost savings which in turn pays the contractor. Therefore, the goal of the ESPC is to reduce energy consumption and to decrease the amount the installation pays its utility provider. The cost for electric service, however, can actually increase if an installation reduces electric

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the payment period and cost sharing formula. For instance, the government may choose to structure the contract so that the contractor retains all the cost savings for a specific period. In return, the contract is paid quickly enabling the installation to capture all the cost savings much sooner than if the parties had agreed to share the cost savings. The government can also structure the contract so that it shares in the savings during the contract term.

[205] The installation's utility costs before project implementation is called the energy baseline. For a description of how the energy baseline is calculated, *see* HANSEN & WEISMAN, *supra* note 196, at 92.

[206] *See* 42 U.S.C. § 8287(a)(2)(B) (1994) (requiring the contract to contain a guarantee of savings to the installation).

[207] Exec. Order No. 13,123 § 401.

[208] *See* 10 CFR § 436.31 ("Energy savings means the determination, in electrical or thermal units (e.g., kilowatt-hour (kwh), kilowatt (kw), or British thermal units (Btu)), of the reduction in energy use or demand by comparing consumption or demand, after completion of contractor-installed energy conservation measures, to an energy baseline established in the contract.").

[209] The goal of the ESPC is twofold: reducing the amount of energy a facility consumes and creating monetary savings. The House Conference Report reflects this dual purpose by stating that the goal of the ESPC is to "guarantee significant energy savings and from

consumption.[210] Many ESPCs fail to produce cost savings because the savings were nullified by changes in the utility rate schedule. [211]

b. ESPC Statutory and Regulatory Authority

Like any government contract, the ESPC is subject to procurement laws and regulations. ESPCs are unique in that the authorizing statutes giving the DoD authority to enter these contracts also allow the creation of alternate contract procedures. DoD authority to enter ESPCs derives from provisions contained in the National Defense Authorization Act of 1991[212] and EPACT.[213] The authorization act allows the DoD to contract for energy conservation measures using "shared energy savings" contracts with private industry.[214] The term "energy conservation measure" is undefined. However, any measure installed or implemented on a military installation must have a "positive net present value over a period of ten years or less."[215]

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these savings the agency, in effect, makes payment to the contractor." *See* H.R. CONF. REP. NO. 102-1018, *supra* note 146, at 386.

[210] *See supra* notes 100-101 and accompanying text.

[211] *See generally* SHIRLEY HANSEN, PERFORMANCE CONTRACTING FOR ENERGY AND ENVIRONMENTAL SYSTEMS 15 (1993) (noting that reducing the amount of energy consumed by a facility could result in an increase in the cost paid for electricity due to the effect of the reduction on the installation's electric tariff).

[212] 10 U.S.C. § 2865 (1994).

[213] 42 U.S.C. § 8287.

[214] The DoD legislation uses the older term "shared energy savings contract" rather than "energy savings performance contract" used in EPACT. There is no functional difference between the structure of a shared energy contract and an ESPC. The terms are often used interchangeably to describe the same contract mechanism. For a brief history of the ESPC and how the name evolved from the shared energy contract, *see* HANSEN, *supra* note 211, at 2.

[215] *See* 10 U.S.C. § 2865 (a)(3). "Positive net present value" is undefined; however, the term likely means the project must be paid in ten years or less. This interpretation is consistent with language found in 42 U.S.C. § 8253 requiring all energy conservation projects to have payback periods of less than ten years.

The authorization act gives the Secretary of Defense authority to develop simplified contract procedures for selecting and negotiating energy performance contracts.[216] In creating these procedures, the act does not specify which procurement laws or regulations the secretary has authority to alter or ignore. The result of this broad delegation of authority was that the DoD was slow to develop ESPC procedures because it was uncertain of the parameters of its authority.[217] For instance, the contract term for most private sector ESPCs is usually over ten years.[218] Long-term contracts enable the contractor to recoup its capital investment from the energy savings without having to require the customer to pay money for the installation and construction of the project. The authorization act is silent as to the length of the contract. Some argued that any ESPC using the DoD authority would be limited to a five-year term.[219] Without clear statutory authority, the DoD was reluctant to change procurement laws to meet the unique requirements of the ESPC.[220] These issues, however, were resolved with the passage of EPACT.

EPACT authorizes other federal agencies to use the ESPC.[221] The procedures and requirements contained in EPACT are far more extensive than those contained in the DoD authority. EPACT allows federal agencies to enter twenty-five year contracts for

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[216] 10 U.S.C. § 2865(c)(2) (authorizing the Secretary of Defense to create a list of pre-qualified energy contractors).
[217] Snook Interview, *supra* note 46.
[218] *Id.*
[219] Snook Interview, *supra* note 46. *See also* FAR 17.204(e) (providing that contracts, including option periods, are generally limited to five years).
[220] Snook Interview, *supra* note 46. For instance, the DoD did not wish to expand the contract term without some authority to do so. The department was also uncomfortable creating streamlined source selection procedures.
[221] 42 U.S.C. § 8287.

ESPC projects.[222] The act also gives authority to the Secretary of Energy to develop specialized rules and procedures governing use of the ESPC.[223] The statute and its legislative history suggest the DOE has tremendous authority to create any policy or rule effectuating the purpose of the statute-- namely, creating energy savings.[224]

The DOE subsequently developed procedures governing the ESPC program. [225] Like the authorizing statute, the procedures are general in nature and do not require the use of particular conservation measures or projects.[226] For instance, the DOE lists the same conservation measures contained in NECPA as being acceptable projects. The rule also authorizes agencies to develop innovative conservation measures such as those using "co-generation" technology.[227]

The DoD also issued rules governing the ESPC. These rules are contained in DEPPM 94-2.[228] In many respects, the procedures contained in the DoD memorandum are identical to the DOE procedures. Like the DOE rules, the DEPPM establishes a comprehensive, two-tiered contractor selection process.

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[222] *Id.* § 8287(a)(1).
[223] *Id.* § 8287(b).
[224] *Id.* § 8287(b). *See also* H.R. CONF. REP. NO. 102-1018, *supra* note 146, at 386 (recognizing the need to alter traditional contracting procedures because most are not designed to address the unique requirements of energy performance contracts).
[225] *See* 10 C.F.R. § 436.
[226] *See id.* § 436. This section contains the procedures and requirements developed by the DOE for ESPC contracts. In addition to providing key definitions, the section describes the source selection procedures agencies are to use. Source selection is accomplished in two phases. Contractors must first become pre-qualified to perform energy conservation services on federal installations. An extensive set of rules govern the pre-qualification process. Once qualified, the contractor is eligible to receive award of any federal ESPC project. The DOE procedures also include standard terms and conditions which must be included in every ESPC contract.
[227] *Id.* § 436.3 (co-generation is the process where energy, contained in fluids or gasses, is captured and used for other industrial processes or purposes).
[228] DEPPM 94-2, *supra* note 188.

Before an ESCO is eligible to participate in a DoD ESPC, it must become pre-qualified. An ESCO becomes pre-qualified by submitting information concerning its technical capability, financial resources and experience to a panel consisting of representatives from each of the military departments.[229] The panel determines whether the company possesses the technical capability to perform energy conservation work.[230] If qualified, the contractor is added to the list of "pre-qualified" energy services contractors and may be considered for all DoD ESPC projects.[231]

DEPPM 94-2 does not specify the type of conservation projects military departments must use. Rather, the memorandum is broadly written to enable each installation to implement any conservation project which "reduces the overall operating costs" of the installation or facility.[232]

The DoD has additional authority to enter contracts with ESCOs that have been selected by the utility company serving the installation.[233] Under this option, installations can negotiate directly with these utility sponsored ESCOs so long as the utility uses a "competitive" selection process. To ensure a competitive selection, the Contracting Officer obtains a statement from the utility describing the selection procedure used.[234] Assuming the CO is satisfied with the selection procedure, the installation may enter a contract with the utility selected ESCO.

In the past, most DoD ESPC projects have not included renewable energy

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[229] *Id.*
[230] *Id.*
[231] *Id.*
[232] *Id.*
[233] 10 U.S.C. § 2865(c)(2)(B).
[234] DEPPM 94-2, *supra* note 188.

technologies. There are two plausible explanations for this occurrence. First, military installations simply have not required ESCOs to install such technologies.[235] Second, many renewable projects, such as those involving solar technology, involve significant capital outlays. It takes the ESCO longer to recoup these costs because contract payments are derived entirely from savings. Accordingly, most ESCOs avoid proposing energy projects involving significant investments.[236] However, combining energy requirements into a single performance-based contract may address ESCO concerns regarding the payback length. This is more fully explored in the final chapter examining the use of performance contracting to combine installation energy requirements.

[235] Snook Interview, *supra* note 46.
[236] HANSEN, *supra* note 211, at 187.

IV. Performance-Based Contracting: Introduction

The following section is divided into four parts. The first part provides an overview of performance contracting and describes its requirements. This section also considers whether the rules governing performance contracting allow "electric utility service" to be included as part of a performance contract. The second part examines the energy requirements discussed in the previous chapters and explains how military installations can include each in a single performance-based contract. The third part describes economic incentives and penalty provisions installations should include in a contract to maximize government cost savings and increase contractor performance. The final part advocates a change in the law and DoD policy governing utility privatization.

A. Performance Contracting

1. Background and Theory

Studies conducted by federal agencies in the late 1980s show that the government was receiving poor service from its contractors.[237] Poor service was attributed to the way contracts were drafted and structured. Most contracts contained comprehensive statements of work delineating in precise detail how the contractor was to accomplish work under the contract.[238] Detailed work statements provide no incentive to the contractor to perform work more efficiently. Instead, the contractor simply performs in the manner specified by the contract.

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[237] OFFICE OF FEDERAL PROCUREMENT POLICY, POLICY LETTER 91-2, SERVICE CONTRACTING (April 9, 1991) [hereinafter OFPP POLICY LETTER].
[238] *Id.*

Another reason for poor service was that many of these contracts contained inadequate contractor surveillance plans.[239] Without an effective surveillance plan, the government has no way of determining whether the contractor is complying with contract requirements. Studies also showed most contracts emphasized contract price over quality of performance.[240]

To solve these problems, the Office of Federal Procurement Policy (OFPP) issued a policy letter in 1991 encouraging federal agencies to use performance contracting.[241] Performance contracting is designed to increase the quality of performance while also reducing contract costs.[242] Performance contracts differ from traditional contracts in that performance contracts describe "what" the government requires. The details on how to perform the work are left to the contractor. This concept is described in further detail below.

The FAR requires agencies to use performance contracting "to the maximum extent practicable" when acquiring services.[243] Certain contracts are excepted from this requirement, including contracts for utility service acquired under FAR Part 41.[244] This exception suggests there is doubt whether utility service is truly a "service" as opposed to an item of supply. This debate is not new to the utility industry. State courts have

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[239] *Id.*
[240] *Id.*
[241] *Id.*
[242] William D. Eggers, *Performance-Based Contracting: Designing State-of-the Art Contract Administration and Monitoring Systems*, REASON PUB. POL'Y INST., May 1997, at 1.
[243] FAR 37.102.
[244] FAR 37.102(a)(3).

examined whether electricity provided by a utility company is a "good" under the Uniform Commercial Code or whether it is more appropriately classified as a service.[245]

Under the FAR, "goods" are included in the definition of "supply."[246] Whether electricity is a supply or service is critical to the contracting process. Different rules concerning funding, contract type, and applicability of certain FAR clauses apply depending on whether the acquisition is one for services or supplies.[247]

The statute enabling federal agencies to buy electricity, 41 U.S.C. § 481(a)(3), does not define or describe the term "electric utility service." FAR Part 41 is also of little use in clarifying this issue. It defines "utility service" simply as the "furnishing of electricity."[248] "Service," as the term is used in most government contracts, means a "contract that directly engages the time and effort of a contractor whose primary purpose is to perform an identifiable task rather than to furnish an end item of supply."[249]

In contrast, "supply" is broadly defined to be "all property except land or interest[s] in land."[250] Arguably, an organization buying only units of electricity is merely buying a "supply." Electricity bought in this manner is delivered to a specific location, in specific

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[245] *See generally* 67 AM. JUR. 2d *Sales* § 52 (1985). Courts finding electricity to be a "good" place emphasis on the manner by which electricity is delivered and measured. Specifically, electricity is delivered to consumers in a "usable" state and can be measured and priced on a "unit" basis. In contrast, other courts hold that electricity is more analogous to the sale of a "service." Unfortunately, the finding of these courts is based on conclusory statements that electric service does not constitute a "good" under the Uniform Commercial Code. There is no analysis or rationale supporting the courts finding.

[246] FAR 2.101.

[247] JOHN CIBINIC JR. & RALPH C. NASH JR., FORMATION OF GOVERNMENT CONTRACTS 3 (Geo. Wash. Univ. 3rd ed. 1998).

[248] FAR 41.101.

[249] FAR 37.101

[250] FAR 2.101.

quantities at a pre-determined price. In addition, electricity supplied in this way does not require the contractor to perform an "identifiable task." Requirements, however, can be structured so that the contractor is required to provide both a supply as well as a service. Combining electricity with other energy-related requirements, as this thesis suggests, requires the contractor to do more than deliver units of electricity. Instead, the contractor must manage the supply of electricity with other actions taken under the contract.

For example, in reducing energy consumption, the contractor will plan and install energy conservation measures throughout the installation. As these projects are brought on-line, the amount of electricity the installation requires decreases. As electric consumption decreases, the contractor must adjust its purchases of electricity to account for the difference.

If the installation requires the contractor to acquire a certain percentage of electricity from renewable sources, further adjustments in the quantity and type of electric power will be necessary. To comply with such a requirement, the contractor must decrease its purchases of electric generation produced from fossil plants and substitute electricity generated from renewable sources. This process requires the contractor to constantly survey the electric market for the best price for both renewable and fossil generation.

Under a contract for combined energy requirements, the contractor is providing an energy service. This type of contract requires the contractor to assemble an electricity "portfolio" necessitating constant adjustments as actions are taken to comply with other contract requirements.[251]

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[251] Evidence suggests the electric utility industry is moving toward a "service" type industry. Electric deregulation forced a number of utilities to restructure operations to improve competitiveness. Many utilities are merging or partnering with other companies

2. Performance Contracting Requirements

Federal agencies have avoided performance contracting for several reasons. First, although performance contracting has been around for some time, it is relatively new to the federal government. Accordingly, agencies are still learning how to create and manage these contracts.[252] Second, lack of experience increases the time it takes to plan and draft the contract.[253] Third, there have been several highly publicized performance contracting disasters at the federal level.[254]

There is little guidance or law governing use of performance contracting by federal agencies. The single best publication explaining the structure and format of a

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to create conglomerates offering customers a variety of services. These services consist of the provision of electricity as well as "energy management services." Energy management services include energy conservation activities as well as the management of electric distribution systems. *See generally* Philip S. Cross, *Utility Mergers: Local Concerns, National Trends,* PUB. UTIL. FORT., January 15, 1998, at 24.

[252] There are several books on performance contracting providing background information and descriptions on how performance contracts are written and managed. Historically, performance contracts have been used by state governments to reform public education. For background on how state governments use performance contracting, s*ee generally* JAMES MECKLENBURGER, PERFORMANCE CONTRACTING (1972); *and* CHARLES BLASCHKE, PERFORMANCE CONTRACTING: WHO PROFITS MOST? (1972). In addition, performance contracting has been used extensively by the energy services industry. For a description of energy service contracts and contractors, s*ee supra* notes 192-211 and accompanying text. *See also* HANSEN & WEISMAN, *supra* note 196; HANSEN, *supra* note 211; PETER N. NEMETZ & MARILYN HANKEY, ECONOMIC INCENTIVES FOR ENERGY CONSERVATION (1984); *and* THUMANN & WAINWRIGHT, *supra* note 198.

[253] *Defense Infrastructure, supra* note 17, at 7.

[254] The DOE has been sharply criticized for the way it structured and managed performance contracts. For example, many of the DOE performance contracts failed to measure contract performance. In other words, the agency had no way of knowing whether the contractor was completing work required by the contract. The DOE also paid excessive performance fees to contractors, and in some cases, paid fees for work that was never completed. For a detailed description of DOE's performance contracting problems and lessons learned, *see The Department of Energy's Implementation of Contract Reform: Mismanagement of Performance-Based Contracting Before the Subcommittee on Oversight and Investigations of the Committee on Commerce,* 105th Cong. (1997).

performance contract is the OFPP guide entitled "Information on Best Practices for Performance-Based Service Contracting."[255]

While there is no correct way to write a performance contract, all performance contracts share common elements. Each performance contract contains a Performance Work Statement (PWS).[256] The PWS describes what the agency requires. The requirement should be stated in terms of the end result or objective the contractor is to achieve.[257] Drafting the requirement in this manner places responsibility on the contractor to determine how best to accomplish the contract work.

Second, the contract must contain performance standards that relate to the performance requirement.[258] Examples of performance standards include quality, timeliness, or quantity. These performance standards are usually tied to the contractor's compensation scheme. This encourages contractors to maximize performance through a series of economic rewards and penalties.[259]

Third, each contract must have a Quality Assurance Plan (QAP) explaining how the contractor's performance is measured.[260] The QAP is critical to the contracting process because it enables the agency to determine whether the contractor is performing in

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[255] OFFICE OF FEDERAL PROCUREMENT POLICY, INFORMATION ON BEST PRACTICES FOR PERFORMANCE-BASED SERVICE CONTRACTING (October 1998) [hereinafter OFPP GUIDE].
[256] *Id.* at 7.
[257] FAR 37.602(a). For example, a performance contract will require the contractor to "maintain the grass so that its length is always between two and three inches in height." The contract does not tell the contractor how to meet this requirement. Rather, the method for achieving the requirement is left to the discretion of the contractor. *See* OFPP GUIDE, *supra* note 254, at 18.
[258] OFPP GUIDE, *supra* note 255, at Appendix 3.
[259] FAR 37.602(b)-(e). Reward and penalty provisions are discussed *infra* Part IV.C.
[260] OFPP GUIDE, *supra* note 255, at 21.

accordance with the contract requirements. The QAP also measures the quality of the work performed.

There are a variety of quality assurance plans available to measure contract performance.[261] In creating a QAP for a contract encompassing related energy requirements, the DoD should look to the quality plans already in use to measure performance under ESPC contracts. These plans measure the level of energy savings a contractor produces from installed conservation measures. ESPC verification procedures for federal agencies are based on a model developed by the DOE. This model derives from the International Performance Measurement and Verification Protocol (IPMVP), also known as the North American Energy Measurement Verification Protocol.[262] While this protocol requires tailoring if used to encompass other installation energy requirements, it provides a useful starting point in structuring a QAP.

Finally, if the contract requirement is critical to the agency, then the contract must contain positive and negative incentives.[263] These incentives and penalties should be described in the PWS and the QAP. The provision of electricity, coupled with conservation measures and utility privatization, is certainly critical to military installations. Without electricity, the installation ceases to operate.

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[261] *Id.* at 21. *See also* HANSEN & WEISMAN, *supra* note 196, at 51.
[262] *See* DEPARTMENT OF ENERGY, MEASUREMENT AND VERIFICATION GUIDELINES FOR FEDERAL ENERGY PROJECTS (Feb. 1996). This document is over nineteen chapters in length and provides extensive analysis and guidelines for developing measurement and verification methodologies for measuring energy conservation projects.
[263] OFPP GUIDE, *supra* note 255, at Appendix 3.

B. The Privatization of Electric Utility Systems Using Performance-Based Contracting: Combining Electricity and Energy Conservation

The requirement to privatize DoD utility systems offers military installations the opportunity to include other energy requirements as part of its utility transfer. These requirements include the purchase of electric utility service, reducing energy consumption and implementing projects using renewable forms of energy. Each energy requirement described in this thesis shares a common element. All affect electric consumption in some way. When each is acquired separately, unintended consequences may occur.

For example, energy conservation measures, including those involving renewable technologies, reduce the amount of electricity an installation consumes. This reduction may increase the cost the installation pays for electricity.[264] Thus, an installation may save energy while its total operating cost increases as a result of conservation actions taken.

The privatization of an electric system can also lead to unintended results. A contractor acquiring an electric system will employ technologies that improve the system's energy efficiency. These technologies are the same or similar technologies ESCOs use to improve energy efficiency under an ESPC.[265] The dilemma installations face is that energy reductions from projects relating to the utility system can conflict with actions taken by an ESPC contractor. Contracting offices will have the odious task of

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[264] *See supra* notes 100-101 and accompanying text explaining how changes in electric consumption can effect an installation's electric tariff.
[265] *See supra* notes 201-202 and accompanying text.

determining which contractor produced the energy savings. The ESCO, whose payment is based entirely on savings, has the most to lose.

Combining installation energy requirements into a single contract will prevent these results from occurring. A combined requirement enables the contractor to plan each requirement so that conflict is either eliminated or minimized. In addition, energy savings derived from conservation activities can be traced directly to the contractor and not to some other contractor performing the same or similar work on the installation.

Combining requirements, however, may invite protests from the small business community. Small business will allege that by combining or "bundling" requirements, only large businesses will be able to satisfy the contract demands.[266] General Accounting Office rulings, however, allow agencies to combine requirements if necessary to meet the government's minimum needs or to obtain cost savings.[267]

Installations gain numerous efficiencies by combining energy requirements. The current way installations buy electricity prevents installations from obtaining electricity from the cheapest source. Instead, installations buy electricity from the franchised utility regardless of price. However, combining the requirement to obtain electricity with other energy requirements enables installations to do what they have been

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[266] Contract bundling is defined as the "consolidation of two or more requirements for goods or services previously provided or performed under separate smaller contracts into a solicitation of offers for a single contract that is likely to be unsuitable for award to a small business concern...". *See* 10 U.S.C. § 632(o)(1) (1994). Before an agency combines requirements, the head of the contracting agency must determine that the benefits derived justify its use. *See* 15 U.S.C. § 644(e)(3) (1994). To minimize the impact on small business, the agency could structure its requirement to require subcontracting plans with small business.

[267] *See* La Barge Prods., Inc., Comp. Gen. Dec. B-232201, 88-2 CPD ¶ 510. *See also* FAR 7.202 and 10 U.S.C. § 2384(a) (1994) requiring agencies to obtain supplies in a method that results in a total cost and unit cost most advantageous to the government.

unable to do in the past-- access different sources and types of generation. This access is obtained by the contractor's ability to qualify its purchases of electricity as a wholesale transaction under federal law.[268]

A contractor obtaining wholesale electric access will be able to access not only cheaper electricity, but electricity generated from sources using renewable technologies. This enables the contractor to integrate electricity purchases with the requirement to obtain renewable electricity. As described, a key reason installations have avoided renewable electricity is because of its high price. Wholesale electric access allows the contractor to mitigate purchases of higher priced renewable power with electricity obtained from cheaper sources.

Combining energy requirements also allows the contractor to plan for reduced electric consumption resulting from energy conservation measures. If decreases in electric consumption cause an increase in the price of electricity, the contractor can take steps to mitigate or negate the impact. For instance, the contractor could conduct a market survey and, based on the change in price, obtain electricity from sources offering cheaper rates.

A combined approach also enables the contractor to create economies of scale. In other words, by increasing the size and scope of work, a contractor can leverage its buying power. For example, a contractor can generally obtain reduced prices for equipment and supplies if it buys in bulk.[269] Thus, the more work a contractor receives under a contract increases its ability to use market forces to its advantage.

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[268] *See supra* note 116 and accompanying text.
[269] *See* Dean Maschoff et al., *Generating Plant Sales and Acquisitions: Who's Doing What, and Why?*, PUB. UTIL. FORT., Feb. 15, 1999, at 42 (providing a description of how utility providers use economies of scale to increase efficiency and lower costs).

The ability to leverage market forces should alleviate some of the ESCOs concern regarding the payback period for capital intensive projects involving renewable technologies. The ESCO may be able to obtain discounts from its suppliers depending on the number and type of technologies it acquires. More importantly, a combined energy contract enables the ESCO to maximize savings throughout each part of the installation. These savings result from either the installation of conservation projects, electricity acquisitions, or a combination of both. Consequently, increasing the amount of savings enables the ESCO to re-capture its costs at a faster rate.

Use of a single contract also results in non-economic benefits. Contracting Officers will benefit by not having to award and administer four separate energy contracts. Instead, Contracting Officers will have one energy contract to manage. One contract also eliminates the need of the Contracting Officer to coordinate with different contractors to ensure the actions of one contractor do not conflict with actions taken by another.

While combining energy requirements into one contract may make business sense, the issue is whether it is legally permissible to do so. To resolve this question, the statute underlying each energy requirement must be examined to determine whether contracting restrictions are imposed. The statutory basis of each energy requirement is described in the first two chapters of this thesis. A pervasive theme among these statutes is the discretion each provides military installations. The following section describes the legal authority for combining these requirements into a single contract.

1. Electric Utility Service

As described in the second chapter, the most regulated of an installation's energy requirement is the acquisition of electric utility service. As a result of the DoD

Appropriations Act of 1988, most military installations contract for utility service on a sole source basis with state franchised utilities. While the acquisition of electric service may be more regulated than other requirements, the statute and regulations provide enough flexibility to include the requirement as part of a related energy procurement.

The appropriation act restriction only requires installations to comply with state law.[270] There is no prohibition against combining the acquisition of electricity with similar energy-related requirements. The FAR even contemplates such a scenario. FAR Part 41, applicable to the purchase of electric service, lists those transactions covered by the sub-part.[271] FAR 41.102 provides that an agency *may* choose to apply its provisions if *utility service* is purchased as part of an ESPC.[272] In other words, military installations can include the requirement to supply electric service as part of another contract requirement. Doing so places the responsibility for acquiring electricity on the contractor and not the installation. The contractor must then comply with *federal* as opposed to

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[270] *See DoD Authorization Bill would Require Military Bases to Buy Cheapest Power,* ENERGY REP., June 26, 1995, *available in* LEXIS, News Library, Energy and Utility News Stories (describing the policy reasons underlying the restriction contained in the DoD Appropriations Act of 1988). The DoD appropriations act of 1988 stems from intensive lobbying efforts by utility companies to prevent large federal customers from switching service providers. The theory advanced by utilities was that residential customers will be burdened with "stranded costs" if large federal facilities were permitted to switch utility providers at will. However, this issue is becoming moot as states begin the move toward electric deregulation. States considering electric deregulation are determining the amount of the utilities stranded cost and are determining how those costs should be distributed among various classes of ratepayers. For instance, in California each utility customer is responsible for paying a charge for stranded costs. The charge will disappear once the public utility commission determines the utility has recouped its costs. *See Lights Stay on As California Switches to Competition, but Little Impact Seen,* THE ENERGY REP., April 6, *available in* 1998 WL 9187015.

[271] FAR 41.102 (providing that Part 41 applies to the acquisition of utility service and related connection charges and termination liabilities).

[272] FAR 41.102(b)(7).

state law when purchasing electric utility service. To date, no military installation has included electric utility service as part of either an ESPC or other type of contract.[273]

2. Utility Privatization

The statute providing authority to military departments to privatize installation utility systems does not preclude the DoD from including other energy requirements as part of the utility transfer. The procedures contained in the statute call for the military departments to ensure each utility transfer is economical and cost effective over its life-cycle. In addition, the military departments have authority to create additional procedures to protect the government's interest.[274]

The statute contemplates military installations combining some requirements. For instance, the statute authorizes a contractor to propose a *reduced rate for electric service.* This language clearly allows the DoD to include the requirement to provide electric utility service as part of a utility transfer. As described in the first chapter, the underlying purpose of privatizing utility assets is to create cost efficiencies. Therefore, any procedure that increases cost savings and minimizes economic risk to the government is consistent with the statute's purpose-- achieving cost savings.

Including related energy requirements as part of the utility transfer enables the installation to ensure cost savings by preventing the conflicts that can occur when requirements are acquired separately. As described in the preceding section, these conflicts can have economic consequences, as when the electricity rate increases as a result of energy conservation activities.

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[273] Snook Interview, *supra* note 46.
[274] 10 U.S.C. § 2688(f).

3. Energy Conservation and Renewable Energy Requirements

a. Energy Conservation Requirements

Other DoD energy requirements described in the second chapter include the requirement to reduce energy consumption at military installations. Energy reduction requirements derive from federal law and executive order. Neither the statute nor the EO requires a specific contract method for reducing energy consumption. EO 13,123 and the legislative history of EPACT encourage agencies to create unique and innovative approaches to conserving energy. Neither prevent an installation from including this requirement as part of another energy requirement.

b. Renewable Technologies

The laws and executive order relating to the installation of renewable technology in DoD buildings and facilities do not specify the form of contract the DoD is to use. Because renewable technologies reduce the amount of energy an installation requires from its utility provider, there is no reason they could not be required as part of the installation's energy conservation requirement. ESCOs are capable of supplying renewable technologies. As described, installations have not required and ESCOs have been reluctant to propose such technologies. The economies of scale that will be created by combining requirements may encourage contractors to offer more technologies using renewable forms of energy.

EO 13,123 requires the DoD to survey each building to determine which renewable technologies to install. The order does not prevent the DoD from placing this responsibility on a contractor. Structuring the contract in this way allows the DoD to receive the benefit of the contractor's expertise and experience in procuring renewable

technologies. Also, the contractor will have incentive to conduct a thorough review because any savings derived from such technologies can increase the contractor's share of the savings.[275]

c. Renewable Electricity

EO 13,123 requires agencies to increase use of renewable electricity. The EO, however, does not specify how agencies are to meet this requirement. An installations can satisfy the Order's requirement by combining its energy requirements in a way that provides access to renewable electricity. This can be achieved by obtaining electricity sold at wholesale.[276] Wholesale access provides not only the ability to receive cheaper electricity, but also to electricity generated from renewable energy sources.

4. Use of Performance Contracting to Combine Energy Requirements

Structuring a contract for combined energy services will be no easy task. To assist in this process, military installations should use the provisions contained in FAR Part 15. FAR 15.201 authorizes the government to exchange information with private industry before issuing an RFP. Information can be exchanged through business conferences, hearings, one-on-one meetings with potential offerors or through a draft RFP process.[277] By leveraging the experience of private industry, an installation ensures its contract is realistic in terms of its requirement and contains appropriate incentives and penalty provisions.

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[275] *See* discussion *infra* Part 4.C for ways to include performance incentives in a contract for combined energy requirements.
[276] *See supra* notes 116-120 and accompanying text.
[277] FAR 15.201(c).

Contracting for energy requirements can be made difficult because of the technology involved. Instead of detailed specifications explaining precisely how the work is to be performed, the installation need only specify the results the contractor is to achieve. This is relatively easy to conceptualize in that the underlying purpose of a combined acquisition for energy services is to save energy and reduce operating costs. Because performance contracting emphasizes end results rather than the method of performance, the risk of performance failure shifts from the government to the contractor. [278]

The tool needed to combine each of these requirements into one contract already exists. Agencies have been using the ESPC for the past several years to reduce energy consumption. While the ESPC is not a panacea, it offers installations a foundation upon which to include related energy requirements.

The legislative authority for the ESPC is expansive enough to include other requirements relating to electric energy. Both the statute and its legislative history make clear that that any measure that conserves energy and reduces cost is consistent with the overall purpose of the statute.[279] The DEPPM addressing ESPC also provides that any project reducing the overall operating costs of the installation or facility can be included within an ESPC.[280]

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[278] Under non-performance based government contracts, a contractor can receive an equitable adjustments if it demonstrates that the contract could not be performed because of defects in the specifications. This theory of recovery is based on the implied warranty of specification. In other words, the government warrants that if followed, the specification will produce the result required by the contract. It is more difficult for a contractor to recover based on a defective specification theory if the specification is performance based. NASH & CIBINIC., *supra* note 203, at 275. For other theories of contractor recovery based on government specifications, *see* Frank J. Baltz & Daniel S. Herzfeld, *Impracticable Specifications*, 34 THE PROCUREMENT LAWYER 3 (Winter 1999).
[279] *See supra* notes 212-234 and accompanying text.
[280] DEPPM 94-2, *supra* note 188.

The privatization of electric systems is also consistent with the underlying objectives of the ESPC. In making the electric system more efficient, a contractor will undertake the same or similar projects as a contractor performing work under an ESPC. There is no reason to have separate conservation contractors performing the same work on an installation. As discussed, the actions taken by one contractor may conflict with those taken by another.

Including the requirement to obtain electricity as part of the ESPC ensures that conservation activities do not cause the rate paid for electricity to increase. As described, the pricing structure of many utility providers penalize customers whose consumption varies from the amounts specified in the tariff. One contractor having responsibility to install energy conservation measures and to buy electricity allows the contractor to coordinate the purchase of electricity with the implementation of conservation measures. Recognizing this tension between conservation measures and electricity, the FAR contemplates an ESCO providing electricity to an installation under the provisions of an ESPC.[281]

C. Utility Privatization: Developing Incentives and Penalties

The OFPP policy letter states that "incentives should be used when they will induce better quality performance and may be either positive, negative, or a combination of both. Incentives should apply to the most important aspects of the work rather than every individual task."[282] Negative incentives should closely approximate lost value to the government. The establishment of appropriate incentives and rewards must be

[281] *See supra* notes 271-272 and accompanying text.
[282] OFPP POLICY LETTER, *supra* note 237.

accomplished during the acquisition planning process. The type of incentives and penalties will be different depending on the unique circumstances and goals of the installation.

An installation could structure its contract similar to that of the ESPC. In other words, the contractor will "share" in the savings generated from its combined effort. Incentives can also be structured to encourage the contractor to supply electricity generated from renewable energy sources or to encourage the use of particular technologies such as co-generation or fuel cells. The types of renewable technologies or amount of renewable electricity to be acquired is up to each installation to decide. If the contract is structured as an ESPC, the contract must guarantee savings to the installation. This is the key "negative incentive." If the cost to the installation exceeds an established energy baseline, the contractor will not be paid.

D. The Need for Legislative and DoD Policy Change

The applicability of federal procurement laws and regulations to the privatization process is beyond the scope of this article.[283] However, the military departments would be well served if Congress provides statutory guidance concerning the method for privatizing an asset, and direction concerning which procurement rules the DoD must follow and which can be overlooked or modified. In most instances, broad delegations of authority encourage agencies to take necessary action to effectuate a stated purpose.

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[283] For general issues relating to privatization, *see generally* Clayton P. Gillette & Paul B. Stephan III, *Constitutional Limitations on Privatization*, 46 AM. J. COMP. L. 481 (1998); *and* Edwin R. Render, *The Privatization of a Military Installation: A Misapplication of the Base Closure and Realignment Act*, 44 NAVAL L. REV. 245 (1997).

Unlimited discretion, however, can paralyze an agency's ability to act.[284] This is especially true when an agency is given unfettered discretion to alter fundamental rules and procedures which have guided the agency for years.[285]

Federal procurement laws were written to enable the government to buy goods and services.[286] Once the government accepts the delivery of the good or performance of the service, the relationship between the parties ends.[287] In the context of privatization, procurement laws must be used to convey property the government still requires. In theory, the relationship between the contractor and the government continues indefinitely.

No statute or policy exists describing *how* a transfer should be made or what governs the relationship of the parties after assets are transferred.[288] Because privatization concerns the transfer of federal property, installations must consult laws and regulations addressing this issue.[289] The melding of procurement and property law, coupled with the

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[284] Such was the case with the ESPC program. Congress gave authority to the Secretary of Defense to create rules and procedures to implement energy performance contracting. The DoD took no action until Congress passed more specific authority concerning the contract parameters of the ESPC. *See supra* notes 212-220 and accompanying text describing DoD ESPC authority and problems relating to its implementation.

[285] Examples of contracting principles affected by privatization include the term of the contract, ability to order changes, and contract termination provisions and procedure.

[286] CIBINIC & NASH, *supra* note 247, at 3.

[287] This assumes that a warranty clause, or other post acceptance theory such as fraud, gross mistake amounting to fraud, or latent defect does not extend the contractor's obligation. For a general discussion of post acceptance rights, *See* CIBINIC & NASH., *supra* note 203, at 866.

[288] For instance, should a contract govern the relationship of the parties? If so, what is the contract term? Because privatization involves the transfer of property, federal property law must also be examined. Perhaps the terms and conditions of service could be included as a restrictive covenant running with the property.

[289] *See generally* David G. Ehrhart, Mark W. Frye & Robert G. Lee, *Transferring Use of Federal Real Property: A Challenge to Privatization,* 28 PUB. CONT. L.J. 43 (1998).

unique nature of privatization, increases the likelihood of confusion by those responsible for carrying out the statutory requirement to privatize.[290]

Agencies relying on contract principles to guide privatization will look to the FAR for guidance and authority. Accordingly, FAR Part 41 should be changed to allow installations to combine related energy requirements. An example of how a FAR clause could be worded to authorize combining similar energy requirements is provided below. This clause could serve as an alternate to FAR 52.241-3, Scope and Duration of Contract.

Alternative I

> (a) This contract is for a integrated energy service consisting of the operation and maintenance of the electric utility system, the supply of electric utility service, and the installation and maintenance of energy conservation measures and renewable technologies.
>
> (b) The contractor agrees to acquire, operate, and maintain the electric utility system located at (insert installation). Transfer of this system is made pursuant to the authority contained in 10 U.S.C. § 2688 and shall be conducted in accordance with procedures proscribed by the Secretary of Defense. As part of the utility system transfer, contractor agrees to furnish, and (insert installation) agrees to purchase electric utility service.
>
> (c) In addition to acquiring, operating, and maintaining the electric system, contractor shall finance, design, implement, monitor, and maintain energy conservation measures, including those using renewable forms of electric energy. The acquisition of energy conservation measures and renewable technologies shall be consistent with the requirements of the Energy Policy Act of 1992 (P.L. 102-486), 10 U.S.C. 2865, Executive Order, and DoD procedure.

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[290] *See generally* GEN. ACCT. OFF., REPT. NO. GAO/GGD-97-48, *Privatization: Lessons Learned by State and Local Governments* (Mar. 1997). Experience at the state and local level shows that effective privatization requires a formal structure to ensure proper implementation. State governments also advocate specific legislation to facilitate the implementation of privatization. *See also* Ehrhart, *supra* note 289, at 43 (noting that privatization and real property transfers are often complicated by numerous statutes and regulations).

As may be expected, some within the government may be reluctant or unconvinced that a combined energy acquisition is feasible or authorized. This is especially true given that military departments currently procure each requirement through a separate contract. Specific regulatory authorization, as provided in the above clause, may allay questions regarding the validity of combining related energy requirements.

If installations are to benefit from a combined energy service, then changes must also be made to current DoD procedure. Specifically, DRID No. 49 should be rescinded and replaced with another directive which does not subject utility privatization to the requirements of state law. Subjecting privatization to state law only complicates the process of privatization and invites provincial determinations by state and local governments or regulatory bodies. A new directive should make clear that all contractors, whether they be a utility company or an energy service provider, are eligible to compete for the right to acquire an electric system and to provide energy services. The directive should encourage the military departments to combine related energy requirements so that greater efficiency, both economic and non-economic, can be achieved.

V. Conclusion

The DoD faces enormous change as the end of the twentieth century draws near. If the past is any precedent, the move toward a leaner and more efficient defense department will continue into the next century. Likewise, the evolution of the electric utility industry continues as states begin the slow but persistent move toward deregulation. To prepare for deregulation, utility companies are combining operations to provide a wide variety of services to customers. These services include the provision of electricity, energy conservation, and utility system operations and maintenance. The DoD should harness these efficiencies by using a contract mechanism encapsulating each of the energy requirements described in this thesis.

The privatization of military electric systems provides the DoD the opportunity to structure installation energy requirements in a way that makes sense economically as well as in terms of contract administration. Performance contracting can serve as the catalyst to incentivize the contractor to maximize its performance. Doing so will result in reduced contract costs to the government and a higher quality of service than if each of these requirements were contracted for separately.

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