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Evaluating Cost-alignment Alternatives in Support of a Coast Guard Arctic Strategy

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Abstract

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The Arctic Ocean is warming, creating challenges and opportunities for the United States in this strategically important region. U.S. policymakers have charged the interagency community to assess and prepare. The Department of Defense (DoD) has determined that its current strategic posture in the Arctic is adequate. It is wary about investing more resources in the Arctic through the midterm (2020-2030). The U.S. Coast Guard is already increasing its Arctic operations as human activity increases there. Presently, increased Coast Guard Arctic operations are being driven by offshore oil development. These operations require the Coast Guard to shift resources from other priorities and risks elsewhere in the maritime domain. This paper recommends improved alignment between the costs and benefits of future Coast Guard Arctic operations. It evaluates alternative funding options for policymakers to consider in support of a Coast Guard Arctic Strategy, recommending one for further exploration. It concludes that better cost-alignment would strengthen the Strategy; further, it could accelerate the development of an Arctic maritime infrastructure, which may serve as a prudent hedge to DoD's own conservative Arctic investment strategy.

Evaluating Cost-alignment Alternatives in Support of a Coast Guard Arctic Strategy

Background

In September 2012, the National Snow and Ice Data Center recorded the smallest volume and coverage of ice in the Arctic Ocean in the 33 years since satellites have been used to measure it.[1] The rate of ice decline indicates that, by 2040, the Arctic Ocean may be completely ice-free during parts of the year.[2] The liquid portion of the Arctic is growing. This is transforming the region by inviting increased human activity, thereby creating opportunities and challenges for Arctic nations.

The United States is one of the world's eight Arctic nations. It defines the U.S. Arctic as all U.S. territory north of the Arctic Circle.[3] Thus, the U.S. Arctic is the northern third of Alaska and its offshore waters. These waters include U.S. territorial seas which extend 12 miles off Alaska's coast, and an economic exclusive zone which extends 200 miles. In this zone, the U.S. owns all rights to ocean and seabed resources. U.S. Arctic waters are commonly known as the Bering Strait to Alaska's west, the Chukchi Sea to the northwest, and Beaufort Sea to the northeast.

U.S. policymakers have taken notice of the changing Arctic. They understand the region's importance, and the need to examine the nation's readiness to deal with changes there. In 2009, President G. W. Bush outlined U.S. interests in the Arctic in a presidential directive on Arctic Region Policy. The directive makes note of climate change and increased human activity. It spells out the region's importance to homeland defense, homeland security, transportation, energy development, natural resource development, and environmental protection. With specific regard to security and

defense, the directive called for the Departments of State, Defense, and Homeland Security to:

> a. Develop greater capabilities and capacity, as necessary, to protect United States air, land, and sea borders in the Arctic region;
>
> b. Increase Arctic maritime domain awareness in order to protect maritime commerce, critical infrastructure, and key resources;
>
> c. Preserve the global mobility of United States military and civilian vessels and aircraft throughout the Arctic region;
>
> d. Project a sovereign United States maritime presence in the Arctic in support of essential United States interests; and
>
> e. Encourage the peaceful resolution of disputes in the Arctic region.[4]

The mention of disputes in the region is meant to include disputes over resource claims. Arctic waters may hold over 13% and 30%, respectively, of the world's undiscovered oil and gas reserves.[5] While experts believe that the majority of these energy resources reside in locations of undisputed ownership[6], the potential for disputed claims will remain a reason that the United States will require the ability to project a sovereign maritime presence in the Arctic. Russia has already made a bold extended continental shelf claim that extends to the North Pole.[7] Rising and resource-hungry China is also interested in the Arctic; it is not an Arctic nation, but may be formulating an Arctic policy through which it will seek to pursue energy opportunities.[8]

Congress is likewise aware of the strategic importance of the transforming Arctic. In 2010, it asked DoD for an assessment of U.S. Arctic strategic objectives, capabilities, assets, and infrastructure.[9] In its May 2011 reply to Congress, DoD noted areas where future capability investments would be required as the Arctic transforms.[10] These areas include command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR); ice-capable vessels; and shore-based infrastructure. DoD

also reported that its current capabilities were adequate for meeting defense needs out to the mid-term (2020-2030). The conclusion of DoD's response to Congress was that, with other budget priorities looming, it was too soon to increase spending in the Arctic: "further evaluation of the future operating environment is required before entertaining significant investment in infrastructure or capabilities."[11] One factor in balancing the risk of over-investment, noted DoD's report, is the uncertainty in the growth of human activity in the Arctic.

The U.S. Coast Guard, for its part, has already begun to see an increase in Arctic human activity related to its missions and responsibilities. In the fall of 2012, Shell Oil conducted the first exploration drilling in offshore U.S. Arctic waters in 20 years.[12] The drilling took place in the Chukchi and Beaufort Seas off Alaska's remote north coast. The example of Shell's 2012 operations allow for a good illustration of the Coast Guard's broad maritime responsibilities, which extend into the U.S. Arctic. The Coast Guard uses three general terms to describe these responsibilities: maritime safety, maritime security, and maritime stewardship.

Under safety, the Coast Guard certified Shell's vessels for seaworthiness and design compliance. The Coast Guard approved Shell's vessels' safety equipment such as life preservers, rafts, and fire extinguishers. (The Department of Interior, which regulates drilling, also performed its own certifications of the drilling operation and associated equipment.) The Coast Guard would have provided coastal search and rescue for Shell personnel, as necessary, during drilling operations.

Under maritime security, the Coast Guard approved Shell's security plans, assisted in assessing any security risks, and would have been the first responder in the

event of a terrorism or other maritime security incident. The Coast Guard enforced maritime security and safety zones in the vicinity of Shell's vessels so that protesters and observers could not unduly hazard the operation – intentionally or otherwise.

Under maritime stewardship, the Coast Guard worked to minimize the environmental risks of Shell's operations. It reviewed Shell's spill prevention protocols and cleanup plans. Had a spill occurred during drilling, Coast Guard personnel would have helped coordinate cleanup and recovery efforts. Some Coast Guard cutters would have even performed oil recovery operations directly, using installed oil skimmers. The Coast Guard also assessed the risk of collisions and groundings in high-traffic and high risk areas before Shell navigated to the drill site. It established and maintained the buoys, beacons, and traffic schemes that made safe navigation to the destination possible, further minimizing environmental and other risks to the waterway.

An incident that occurred in late December 2012, after Shell's drilling season was complete, dramatically illustrated the Coast Guard mission set that helps support offshore Arctic drilling. The *Kulluk*, one of the two floating drill rigs used by Shell in the Arctic, broke loose from its tow during a storm while being transported for maintenance from Dutch Harbor, AK to Seattle.[13] The response employed three Coast Guard cutters and several helicopters and other aircraft. The Coast Guard delivered engine parts to a threatened Shell support ship, physically assisted with unsuccessful efforts to restore the *Kulluk*'s tow (the rig grounded on an environmentally sensitive island), and eventually evacuated the 18 crew members from the rig by helicopter hoist.[14] A Coast Guard officer served as the federal on-scene commander. Following the grounding, the Coast Guard oversaw the assessment and salvage efforts of the grounded rig, which

held over 100,000 gallons of diesel fuel. The Coast Guard played a lead role in the unified response, which included over 700[15] state, local, federal, and private responders. Had this incident actually taken place in the remote Arctic drilling area, rather than in the relatively accessible southern waters where it did occur - or had also involved an oil spill - the Coast Guard's response and coordination role would have been significantly larger and more important.

The Public Costs of a Coast Guard Arctic Strategy

For the most part, the Coast Guard was already in place to manage its responsibilities associated with Shell's 2012 Arctic drilling. Coast Guard regulatory programs concerned with the safety and spill prevention aspects of Shell's drilling performed their work from existing bureaus and operations centers in Seattle, WA, Juneau AK, and Washington, DC. These staff and inspection-related activities were carried out with little or no added cost to the government. Similarly, they entailed negligible opportunity cost of displacing other high priority Coast Guard missions.

However, when Shell started drilling, the Coast Guard also made the decision to increase its operational presence in the Arctic. It employed, for the first time, a flight-equipped high endurance cutter off Alaska's North Coast, plus two HH-60 helicopters at a leased, remote operating base in Point Barrow, on the North Coast. These assets were over and above the level of resources normally used for the Coast Guard's seasonal Arctic operation, Operation Arctic Shield. In previous years, Arctic Shield, which centers on Arctic outreach, operations, and assessment of capabilities, featured only non-flight-equipped buoy tenders and a limited, land-based helicopter capability. Coincident with the drilling operations, the Coast Guard saw a need to increase its Arctic capability and capacity. It will likely choose to employ the larger operational

footprint during next year's Arctic drilling season and into the future. The added aircraft and the employment of the more capable high endurance cutter in 2012 represent the first significant incremental costs of a future Coast Guard Arctic strategy.

The Coast Guard is currently formulating its written strategy document for operating in the Arctic, which may be released in early 2013. Within the Strategy, the Coast Guard can be expected to lay out its strategic priorities and to describe the ends, ways, and means for achieving Coast Guard Arctic objectives in the near term (next ten years). The strategy will likely conclude that the Coast Guard's present capabilities and infrastructure are sufficient to meet immediate Arctic needs. That is to say, the same stepped-up operational footprint used in 2012 will remain adequate in the short term: a combination of high endurance cutters and leased, seasonally-based air and communications facilities. The Strategy will also likely point to at least two areas needing investment as the Arctic continues to open up to more human activity: shore infrastructure and communications. The Strategy's discussion of means may be somewhat limited - as agency-level strategies tend to be. Specific questions over how the nation will choose to pay for the increased costs of a Coast Guard Arctic strategy will be left to more senior policymakers, such as Congress and the President's Office of Management and Budget.

Currently, the Coast Guard is paying for the incremental costs of its Arctic Strategy by managing risk across the maritime domain. Neither its budget nor its asset inventory will increase incrementally by virtue of its larger Arctic output; instead, the Coast Guard will choose to employ more resources in the Arctic by determining that a lower priority, or lower risk, exists somewhere else in the U.S. maritime domain. The

nation has relied on the flexible and efficient Coast Guard to make such decisions for generations. The question for policymakers is whether a better approach exists for funding the incremental costs of the Coast Guard's Arctic strategy – one that does not require the Coast Guard to displace other priorities in favor of Arctic growth work. One good approach would be to better align the present principal beneficiaries of an increased Coast Guard Arctic presence with the added costs.

Aligning Public Costs and Benefits

Arctic oil development is a principal reason the Coast Guard is currently increasing its Arctic operations. Other activities in the Arctic are beginning to increase, but these do not yet drive the need for increases in Coast Guard Arctic capability and capacity. For example, international shipping traffic will increase somewhat through Arctic routes that pass close to U.S. shores, but these routes will not become economically viable for most shippers for years.[16] Fish stocks may migrate into warming U.S. Arctic waters, which would require a Coast Guard presence whether or not commercial fishing will be allowed - but this is not happening yet. Two more oil companies will join Shell in U.S. Arctic waters in the next few years.[17] If exploration efforts are successful, the oil industry may greatly expand operations, increasing its dominant share of activity in U.S Arctic waters, and, correspondingly - the reason for the Coast Guard to be there with more cutters and aircraft than it employed before 2012.

An optimal Coast Guard Arctic Strategy would properly align costs and benefits, and would do so in an appropriately time-phased manner. The preceding paragraph suggests that, currently, the oil industry disproportionately drives, and thereby benefits from, the increase in Coast Guard operational presence that began in 2012. This benefit, as it pertains to oil exploration, is conferred rather narrowly: it lands first on the

oil industry, whose drilling is enabled by it. The benefit also lands on the U.S. public (and particularly Alaskans), who theoretically gain a somewhat lower risk of environmental damage should a spill occur while the Coast Guard is already nearby. Benefit spreads more broadly to the international public after the oil enters the marketplace in the form of more plentiful energy. The U.S. Treasury also reaps the benefits of resource royalty payments once production begins. There are many ways to consider the benefits of having an increased Coast Guard operational presence during Arctic drilling, but it is difficult not to conclude that the oil industry is the primary beneficiary. Significant to this discussion is the fact that the industry is a private interest.

Both private and public interests will drive future human activity and government expenditure in the Arctic. Accordingly, such interests contribute to the cost components of a Coast Guard Arctic Strategy. Examining these components is the first step in crafting an appropriate cost-alignment scheme useful to improving the Strategy. Figure 1, on the next page, describes several possible cost components. In the near-term, private interests (oil companies) dominate as the driver for increased Coast Guard operations and investment. However, over time, it would be expected that the weight of the benefits would shift to the general public as security and other public concerns pick up importance in the Arctic. This would be the case if China or Russia began to assert itself more in the region (whether for resources or for other interests), if other nations started to encroach upon fishery resources that migrate into U.S. Arctic waters, or as maritime commercial or recreational traffic increased significantly enough to warrant its own stepped-up Coast Guard presence.

Possible Cost Components of a Coast Guard Arctic Strategy	Beneficiary: Primarily Private or Public?	Likely Near-term need (Present-2020)	Likely Mid-term Need (2020-2030)	Likely Long-term Need (Beyond 2030)
Increased Operational Presence required by offshore energy production	Private	Yes	Yes	Yes
Increased Operational Presence required to defend fisheries resources from foreign encroachment	Public	Not anticipated	May be Needed	May be Needed
Construction of Heavy Icebreaker to assert U.S. Strategic Sovereignty	Public	May be Needed	May be Needed	May be Needed
Arctic Communications Infrastructure	Both the Coast Guard and DoD are cautious about articulating a near-term need over other budget priorities. Basic Arctic infrastructure would benefit private interests in the short term and the general public in the mid- and long term.			
Basic Shore-based Maritime Infrastructure				
Major Land-Based Infrastructure for Strategic Use (e.g. Deep Water Port)	Public	Not anticipated	Unknown	Unknown

Figure 1. Possible cost components of a Coast Guard Arctic Strategy over time: Public and Private Beneficiaries.

Figure 2, below, is a representational graph describing the notional relative balance between the private interest benefit and the public benefit of the Coast Guard Arctic Strategy. Private interests benefit more in the near-term, but the general public's share of benefit will likely increase in the future as the Arctic continues to open.

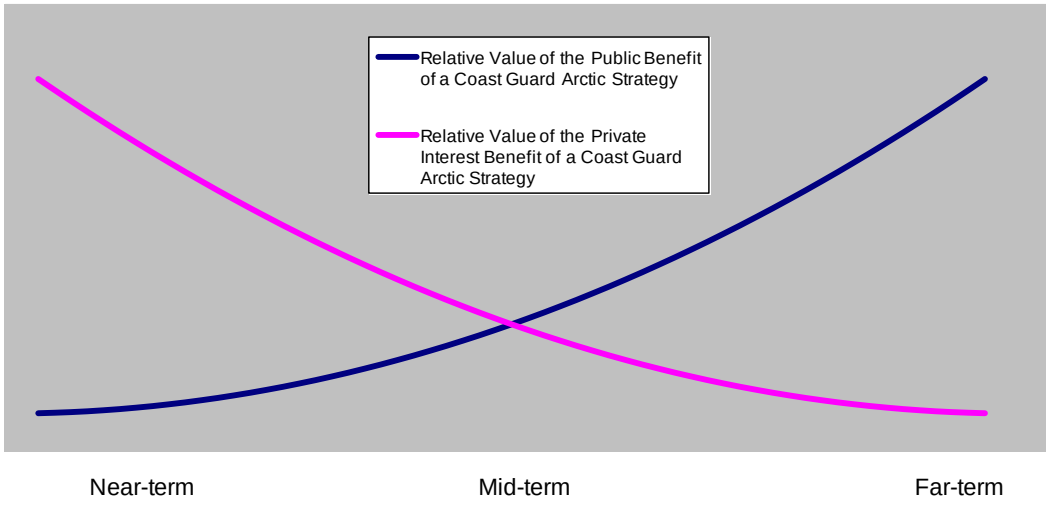

Figure 2. Notional relative balance (over time) of the public and private interest benefits of a Coast Guard Arctic Strategy.

National decision makers strive for proper alignment between costs and benefits, knowing it can contribute to strong national policy and strategy. Some of these advantages are illustrated in the arguments made in favor of targeted benefit taxes and user fees, which are summarized by author and tax expert David Duff. These advantages include: 1) economic efficiency, 2) public accountability, and 3) promotion of fairness.[18]

Accordingly, if Coast Guard Arctic Strategy costs could be better aligned by shifting some of the short-term costs to the oil industry, policymakers might expect the positive benefits of sounder strategy, as follows:

1) Economically Efficient Strategy: By shifting some of the cost burden to the readily identifiable beneficiary - the oil industry - policymakers could ease the burden on the U.S. Treasury. Also, such a funding source could be quite politically stable, allowing at the agency level, efficient and expectations-based planning and employment of Coast Guard assets that support an Arctic Strategy.

2) Publicly Accountable Strategy: Linking more of the government's Arctic costs to the cost of Arctic production informs public decision-making about appropriate levels of government support. Portions of the total cost of Arctic oil production would no longer be hidden within internal Coast Guard risk management decisions. Such transparency should lead to better national decisions on the employment of critically important government resources like Coast Guard cutters and aircraft.

3) Fair Strategy: While taxation and revenue fairness may not be a primary concern for military strategists, they are important to national policymakers and their constituencies who wrestle with such questions as "Is oil production in the Arctic a pure

public good worth devoting some level of public expenditure to facilitate?" or "Is the balance between the public and private costs of Arctic oil development appropriate over time?"

It should be pointed out that there are other ways to share and align costs, benefits, and risks between government and private sector. Liability arrangements, for example, can hold private interests responsible for the public costs incurred by their business operations. In fact, such laws are already in place for oil spill cleanups. Such, after-the-case arrangements, however, do not cover the costs the government incurs up-front in preventing or being ready and available for such problems.

A key to appropriately aligning the costs of the Coast Guard's Arctic strategy would be to seek the correct balance of private and public costs. A good start recognizes that it would be neither fair to expect the oil industry to pay for all Coast Guard Arctic costs, nor advisable to limit Coast Guard operations to what the industry would be willing or able to pay. It would also be important to recognize that the Coast Guard has already budgeted for some level of seasonal Arctic engagement. Operation *Arctic Shield*, already appropriated at a base level by Congress, is a pure public good, meaning the nation as a whole derives benefit from it. The operation serves the purpose of assessing capabilities and preparing the Coast Guard for a wider engagement in a future Arctic Ocean. A reasonable arrangement might be for policymakers to expect the oil industry to shoulder the added size of the Coast Guard's 2012 Arctic footprint: essentially, the cost of a seasonally based high endurance cutter and added helicopter employment time.

In addition, it would likewise be reasonable to expect the oil industry to contribute to the early development of a shore-based maritime and communications infrastructure, which would enable a federal or unified response to a spill or other incident. Currently, no such infrastructure exists on the Arctic coast to support a large government response to a spill. Both the Coast Guard and DoD seem reluctant to invest in such an infrastructure in at least the next ten years. The Coast Guard, always struggling for enough resources, likely fears that such an acquisition request could harm existing requests for other critically needed recapitalization opportunities. The Coast Guard also knows it may get only limited funding assistance from DoD, which intends to wait and reevaluate Arctic needs given the austere federal budget climate. For DoD's part, this may be a wise plan; a strategic defense need for a land-based infrastructure in the Arctic may be years away, if it ever develops.

The General Accountability Office (GAO), however, criticized DoD's Arctic investment strategy in 2011 for its lack of a risk-based approach, summarizing "DoD risks making premature Arctic investments, being late in obtaining needed capabilities, or missing opportunities to minimize costs by collaborating on investments with the United States Coast Guard."[19] Each of GAO's concerns could be mitigated somewhat by cost-sharing with the oil industry on the early development of an Arctic maritime and communications infrastructure. Besides minimizing the damage of a potential oil spill, such an infrastructure would serve as a desirable strategic hedge should DoD and the Department of Homeland Security (DHS) find that greater security and defense needs in the Arctic emerge sooner than expected. Such a plan could be fair and flexible, accommodating varying timeframes over which private and public needs may shift in the

Arctic. For example, a cost-alignment plan could allow for the federal government to pay back oil companies for infrastructure development if the needs of DoD or DHS (i.e., public needs) begin to dominate in the Arctic region before the end of the infrastructure's initial acquisition lifespan. On the other hand, if offshore oil development really takes off but strategic security or other needs fail to emerge in the Arctic, costs and benefits would remain aligned – that is, the oil industry could continue to fund the development and maintenance of the basic Arctic communications and shoreside infrastructure as its primary beneficiary.

Trust Funds as Part of an Arctic Solution

A federal trust fund serves as the best vehicle by which to evaluate Coast Guard Arctic cost-alignment options. Other options are possible, such as the direct funding and construction of an Arctic infrastructure by the oil industry, but would not help pay for the usage costs of Coast Guard assets. Oil companies could not directly pay or "gift" funds directly to the Coast Guard, as these transactions are strictly controlled by law. They also create real or perceived conflict of interest issues. A trust fund provides necessary transparency. Importantly, trust funds also preserve Congress' prerogative to control the funds within. Most trust fund dollars that flow to government agencies for operating costs are strictly appropriated by Congress. This is an important point because it highlights the fact that creating a trust fund cannot be the solution to an Arctic strategic funding issue in and of itself. Trust fund expert Eric Patashnik offers that trust funds are set up for four main reasons: (1) to make users pay; (2) to maximize agency budgets; (3) to reduce political uncertainty; and (4) to safeguard the Treasury.[20] In the earlier discussion of costs and benefit alignment, three of these reasons have already been suggested as desirable features of a Coast Guard Arctic Strategy. Here, it

will also be noted that reason number two also likely holds attractiveness for agency-level planners within the Coast Guard and DoD.

Criteria for Evaluating Cost-Alignment Options

This next section discusses the criteria that will be used in this paper to evaluate cost-alignment alternatives for a Coast Guard Arctic Strategy. The suitability, acceptability, feasibility test for strategy validity described by the U. S. Army War College's J. Boone Bartholomees, Jr.[21] provides a framework that evaluates specific criteria useful in this case. Thus, Arctic cost-alignment options will be examined as follows. Suitability: Will the option succeed in achieving its end, defined as a well-aligned funding arrangement that is stable enough to support Coast Guard operations and investment?; Acceptability: Is the option politically possible or attractive to stakeholders given actual or perceived costs and benefits?; and Feasibility: Does the option provide suitable means to cover the anticipated costs? For each criterion, options will be evaluated on a descriptive scale: very good, good, medium, or poor.

Evaluation of Cost-alignment Options

To review, the specific intent of these cost-alignment options is to shift some of the costs of the Coast Guard's Arctic Strategy to the oil industry – specifically, the costs involved in maintaining an added Coast Guard operational presence in the Arctic, plus the costs of the early development of a basic shore-based maritime Arctic infrastructure. The combined annual costs are assumed to be $58.5 million per year for evaluation purposes.[22] Four different options will be evaluated: Option #1: funds are used from the existing Oil Spill Liability Trust Fund; Option #2: a new trust fund is created, supplied by a percentage of existing Arctic oil development payments such as permit fees, drilling leases, and oil royalties; Option #3: a new trust fund is created, supplied by a new tax

on Arctic oil development; and Option #4: a collaborative approach is employed, by which the oil industry and other stakeholders, such as not-for-profit environmental groups, create a trust fund supplied by donations or voluntary oil industry payments. The next section evaluates each option.

Option #1: The Oil Spill Liability Trust Fund

The Oil Spill Liability Trust Fund (OSLTF), in use since 1990, is supplied by a per/barrel tax on the oil industry. It is used by the federal government for oil spill cleanup and prevention. The fund is used to pay damage claims, and to pay federal and state cleanup costs when the responsible party is unknown or cannot pay. It also funds certain agency operations and research and development. The Coast Guard already receives approximately $50 million in appropriations from the fund each year for activities related to oil spill prevention and cleanup. These monies go toward operations; acquisition, construction, and investment (AC&I); and research and development. In this option, the Coast Guard would receive more funds from the OSLTF to support increased costs of its Arctic Strategy.

Suitability: This option has medium suitability. If the regularity with which the Coast Guard already receives money from the fund is any measure, it could prove to be a very stable and reliable source of funds.[23] However, this option does not align costs as well as other options. The OSLTF is supplied by a tax on the entire oil industry; therefore, oil companies not operating in the Arctic would shoulder much of the cost. This option would align the costs of the Coast Guard's Arctic strategy to the oil industry in general - but not sufficiently to Arctic oil production.

Acceptability: This option has good acceptability. The oil industry generally approves of OSLTF expenditures that support oil spill and prevention. However, the

industry would also be wary of increased expenditures that could weaken the fund's ability to cover large spill costs.[24] Also, the Coast Guard might be indifferent to the notion of asking for more funds from the OSLTF if it expected its budget to be decreased proportionally somewhere else as a result.[25] Since federal budget rules require shifts in appropriated funds to comport with the overall federal budget's projected top line, it could be determined that the Coast Guard itself would have to "donate" an offset as a consequence of receiving more funds from an established trust fund. Were policymakers to pursue this OSLTF option, a carefully crafted appropriation might be required to perpetuate the intent that the Coast Guard's budget should not be reduced elsewhere as a result of receiving more OSLTF dollars. Another hurdle to acceptability is the OSLTF's authorizing language, which limits annual disbursements for Coast Guard operations to $25 million. A legislative change would be required to raise this ceiling.

Feasibility: This option has very good feasibility. The OSLTF is expected to nearly double in size to $4.5 billion in the next six years[26] due to oil tax increases already due to go into effect through 2017.[27] Unless circumstances affected the fund in a very negative manner, or unless Congress chose not to extend the tax past 2017, there would likely be adequate funds available to support Arctic cost-alignment.

Option #2: A New Arctic Trust Fund Supplied by Oil Royalties and Fees

This option involves creating a new trust fund supplied by revenues that Arctic oil companies already expect to pay the federal government. These include rents for production locations, royalty payments based on levels of production, and other fees.[28]

Suitability: This option has very good suitability. It offers very close cost-alignment since revenues are directly tied to Arctic oil production. As a funding source,

such payments should prove to be steady enough to support Coast Guard Arctic cost-alignment. As an analog, the State of Alaska finds oil revenues a stable enough source of revenue to fund the overwhelming majority of its state budget.[29] One consideration is that royalty payments are not made to the government until after production begins. Therefore, other fees, such as portions of permits fees would have to cover costs before production began.

Acceptability: This option has good acceptability. Oil companies would likely not oppose diverting such revenues to a new trust fund, because they already expect to pay these costs to the government on existing and future leases.[30] As most these funds are destined for the general federal treasury anyway, it is unlikely that groups would oppose some specific programming of a portion of these future funds to support the Coast Guard in the Arctic. It remains unclear whether the "newly created" status of the fund would help the Coast Guard argue against having to find its own budgetary offset (as discussed with the OSLTF).

Feasibility: This option has good feasibility. While future annual production levels of the offshore Arctic (and associated royalty revenues) are yet unknown, it stands as a fact that Shell has already paid over $2 billion in permitting fees to operate in the Chukchi Sea alone.[31] Should oil companies overcome challenges posed by the remote location, the production of the estimated oil reserves in the Alaskan outer continental shelf reserves will yield significant royalty payments. The combination of royalties and permit fees would be sufficient to cover annual cost-alignment of Coast Guard operations.

Option #3: A New Arctic Trust Fund Supplied by a New Tax on Arctic Oil Production

In this option, a trust fund would be created and supplied by a new, small tax on Arctic oil production.

Suitability: This option has very good suitability. Since the tax would be new, it could be designed specifically with stability in mind. For example, each oil company drilling in the Arctic might be required to proportionately contribute to Coast Guard Arctic costs – whether its drilling operation was in the exploration or production phase.

Acceptability: This option would have poor acceptability. Oil companies would object on the grounds of fairness, insofar as they have planned their operations according to taxes and fees the government has already fixed. The oil industry, which has a strong federal lobby, would take the position that the federal government should fund its operations from these pre-agreed revenue plans. Environmental groups who oppose Arctic drilling might support such a tax if their strategies included making Arctic drilling more expensive and difficult for the oil industry. Some environmental activists do employ strategies that seek to harm target companies financially. [32]

Feasibility: This option has very good feasibility. Affordability would be assured because a new tax would be designed to adequately cover required costs.

Option #4: A Collaborative Approach among the Oil Industry, Non-Governmental Organizations (NGOs), and the Coast Guard

In this option, oil companies and non-profit environmental groups might recognize a shared interest in maintaining a Coast Guard presence in the Arctic, and work together to supply a new trust fund that supports Coast Guard Arctic costs. Such a fund might be supplied with NGO donated funds and voluntary oil company contributions.

Suitability: This option has medium to poor suitability. Since the supply of resources would be voluntary, it would be difficult to design stability of funds into the arrangement. Oil shareholders or NGO donors could change their levels of support at any time; such uncertainty could make planning difficult for government trust fund managers and agency planners. This option would deliver good cost-alignment, since donated funds would be proffered with the trust fund's intent in mind.

Acceptability: This option has medium acceptability at best. The oil industry, which has a record of working with NGOs and government agencies on projects that support the environment, would likely be interested. However, it might also be skeptical about the idea - wary about involving itself in a working group that could develop both a voice and public influence. Such a group could attain a degree of influence whether or not all of its members possessed what the oil industry might consider an informed and adequate understanding of Arctic oil development - a prospect that might not appeal to the industry.[33] Also, it might be a challenge to identify a strong enough NGO interest willing to support such an effort, materially or otherwise. NGO's that have taken a strong stand against Arctic oil drilling might not chose to partner in this manner out of concerns their involvement would look like an endorsement of Arctic drilling.[34] It would also remain to be seen whether any single NGO or group of NGOs would put enough premium on a Coast Guard presence to invest in such an effort.

Feasibility: This option has medium to poor suitability. It remains questionable whether environmental NGO's, which often operate on limited budgets, would be able to contribute sufficiently financially, and consequentially, whether the oil industry would be willing to fund the majority of such a partnership.

Recommendation

Option # 2 is recommended for further consideration as a framework for a Coast Guard cost-alignment solution in the Arctic. A new Arctic trust fund supplied by oil royalties and other fees scores well against the criteria laid out in this paper. As a trust-fund source, such fees should prove both stable and adequate in supply. Stakeholders, including environmental NGOs and oil companies, would have little to object to. Importantly, the oil industry would not object because it has already agreed to pay such fees to the government on existing and future Arctic oil projects. Convincing congressional authorizers to create a new trust fund, and then appropriators to employ the fund in a way that made up for any required Coast Guard budgetary self-offsetting would remain important steps in carrying out this cost-alignment plan.

One might criticize this recommendation on the grounds that it recommends the use of future taxes that would already be due the federal government from the oil industry. This argument says that while such a scheme might provide better cost-alignment, it does not save the government any money. That is, it provides more funds to the Coast Guard, but funds that were bound for the Treasury anyway. The argument is technically true, but takes a short view of trust fund politics. The GAO points out that a trust fund, because of public expectations, "may provide some degree of political protection".[35] Accordingly, certain constituencies might grow to expect and strongly support the notion that Arctic drillers directly offset the costs of Coast Guard Arctic operations and investment. It follows that if the cost of Coast Guard Arctic operations were to rise as drilling increased, political pressure could enable legislation that required drillers to shoulder the increased costs - with higher taxes or greater royalties. In this case, actual savings to the Treasury would be realized.

Returning to implementation - after setting up such a trust fund, Congress should begin to appropriate from the fund an annual amount necessary for a Coast Guard offshore presence in the Arctic Ocean, plus funds for the development of a basic communications and shoreside maritime infrastructure. Both DHS and DoD should continue to reevaluate the Arctic's strategic importance for national and homeland security. When security or other public needs begin to rise in proportion to the oil industry's private need for the Coast Guard's presence in the Arctic, the sharing of costs should be reevaluated for fair and equitable balance. A cost and benefit alignment should be maintained between the public interest and the private entities that operate in the Arctic.

Conclusion

Better cost-alignment in the Arctic offers the potential for stronger national policy, by enhancing both the accountability, quality, and efficiency of an important regional strategy. Furthermore, by aligning Arctic revenues with development opportunities for a communications and maritime infrastructure, policymakers have an opportunity to hedge against the current DoD and DHS Arctic infrastructure investment strategy, which is rather conservative. Shifting some infrastructure development cost burden to the US Arctic's dominant private interest minimizes the public's risk of investing too early in such an infrastructure, while preserving potential benefits of not falling behind in this critical, emerging region.

Endnotes

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as needed, and then reinvest the remainder in Arctic communications and infrastructure development. Another option would be to bill the asset hours at a lower rate and itemize the costs of infrastructure development separately.

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