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Q&A With Marstel-Day on Climate Adaptation and the DOD

Founded in 2002, Marstel-Day's staff of 130 "thinkers, planners and strategists" delivers policy and hands-on engagement solutions for federal and private clients focused on land and water preservation, climate change and adaptation, energy, and green infrastructure. Over the past several years, a particular emphasis of the firm has been on integrating climate change factors into Department of Defense (DOD) installation plans and community partnerships. Rebecca R. Rubin, president and CEO, discussed the firm's climate change work for DOD agencies and other clients.

CCBJ: Your firm has worked primarily for government agencies, especially the U.S. Department of Defense, including the Secretary of Defense and all four branches of the military. When and how did climate change—both mitigation and adaptation—start showing up on the radar of federal clients?

Rubin: About eight years ago, we started to notice clients have growing concerns about climate perturbations, particularly as those affect energy and water use and access. Over time, we were successful in helping our clients understand some of these problems not as stand-alone issues but as those either caused or exacerbated by climate change. Today, climate effects are much more routinely acknowledged in the federal sector as a type of risk to facilities and operations, and as a result we are seeing an increased need to integrate climate adaptation into clients' short-, mid- and long range plans.

CCBJ: We understand that you've helped DOD agencies interface with renewable energy project developers whose projects posed potential risk to military training or operations, such

as wind farms interfering with radar systems. What are some examples of this work and what was your role?

Rubin: We are directly involved with the Air Force's interface with the DoD Siting Clearinghouse. We review development proposals and help our client understand what potential mission impacts the development might cause, make recommendations on mitigation measures, and facilitate resolution with developers and other federal agencies. Our facilitation of Mitigation Response Teams also helped our client, regulators and developers collaborate on renewable energy projects in mutually agreeable and compatible ways.

CCBJ: Are you expecting these kinds of "conflicts" to increase? What are the key challenges to managing them successfully so both parties are satisfied, especially for the military which is not used to dealing with external stakeholders?

Rubin: In the course of conducting our encroachment assessments at over 40 Air Force installations, we identified climate-based encroachment challenges

ranging from sea level rise, to wildland fires, to water scarcity to increase in severe weather events. Most interesting, however, is that there has been a real change in how DoD thinks about these challenges and in its level of interest in working with communities, which has risen dramatically over the past five years or so as the problems of climate change have become more apparent. DoD has in many ways gone from being an entity that works behind the curtain to one that actively embraces and relies upon community inputs for decision-making. In part this comes about because DoD seeks to share solutions in ways that generate efficiencies for DoD, and those may involve cost-sharing with a community. But even beyond that, or perhaps spurred by that, DoD does have a new level of awareness that most climate solutions cannot be resolved within the boundaries of its own installations and that they require partnering to be as effective as possible.

CCBJ: It seems that under the Obama Administration, there have been a host of executive orders requiring federal agencies to increase energy efficiency and renewable energy and plan for climate change adaptation. The latest EO orders federal agencies to increase procurement of renewable power to 20% by 2020. What opportunities does this present, and what types of firms will be in a position to work with the agencies to achieve the mandate?

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Rubin: One way to think about this is in terms of direct and indirect effects. In terms of direct effects, firms that already work in the renewables arena will be the big winners, and mostly they already have very well-developed relationships with one or more agencies for whom they would do the work. But there are also secondary and often overlooked effects, such as some of the difficulties in reconciling emplacement of renewables on sensitive habitats. There is only so much habitat left out there, and much of it is now contemplated to share space with renewables proposed for siting in those same locations. This type of problem, which involves a fairly nuanced understanding of just how complex an ecosystem is at any scale, may give rise to some work by those biologists, ecologists and other “ologists” associated with less traditional firms who can help weigh some of the trade-offs involved.

CCBJ: You assist clients in developing climate adaptation through landscape-scale solutions, such as protecting open space and habitat with conservation buffers and devising water demand forecasts and security strategies. What are some recent projects in this regard?

Rubin: One such recent water security project was to prepare for the Army Environmental Policy Institute (AEPI) an Army Water Security Strategy that comprehensively addressed Army-wide policy issues to define water security; included a comprehensive study of the Army’s water security management; and identified the key issues on which Army leadership should focus to ensure sustainable quantifies of suitable quality water into the future. The Strategy included a proposed implementation plan to address sustainability and established four goals: protect and preserve sources and rights; reduce demand; improve and maintain infrastructure integrity and security; and address self-sufficiency and risk reduction requirements for contingency bases.

Water security issues are regularly identified at the installation level in our encroachment vulnerability assessments, which call out specific management actions for the base and service leadership to undertake to address or forestall water security issues. As a follow-up to one such set of recommendations, Marstel-Day is currently developing a water security plan for the Marine Corps Recruit Depot San Diego, which currently relies on metropolitan water as its sole source.

On the land conservation front, we provide regular support for preparation of so-called Real Estate Partnering Initiative (REPI) projects for the Marine Corps Air Ground Combat Center (MCAGCC) in Twentynine Palms, California. These projects have supported the important “Wildlife Linkage Campaign” undertaken among MCAGCC, The Trust for Public Land and the Mojave Desert Land Trust to ensure connectivity among critical habitat elements that allow species—especially listed species—to migrate among these areas for foraging, watering and nesting, taking into account changes in habitat that result from climate change.

Our encroachment vulnerability assessments which look at factors encroaching on an installation—such as climate effects—typically require us to prepare a priority land use proposal that aims to achieve compatible land uses, and we have recently done so for Marine Corps Base Camp Pendleton, CA, Seymour-Johnson Air Force Base/Dare County Bombing Range and many others each year.

CCBJ: Decision-making around climate change adaptation is difficult because of the uncertainty of climate projections. What are some of the ways you’ve helped clients devise cost-effective strategies for climate risk mitigation in this highly uncertain context?

Rubin: There are at least two kinds of clients. The first kind is one that has

already had an asset manifestly affected by a climate event—for instance, being inundated by several feet of water, or having a mission-critical area being wiped out and needing to be reconstructed. Those clients generally do not need to be convinced of risks involved and are often ready to use our recommendations as a departure point. For other clients, those not yet affected but nonetheless at risk of climate change effects ranging from the mundane to the dramatic, we generally would try to show them a parametric analysis of what the effects would look like at various levels of increasing climate effect intensity, and work with them to understand what level of risk they are willing to accept for their business operations.

In both cases, some of the most cost-effective strategies involve replacing man-made or so called “hard” infrastructure with various natural resources, such as wetlands to improve water quality rather than building new water treatment facilities; land buffers to reduce the effects of severe storms, flooding or other extreme weather events rather than rebuilding housing or commercial assets; and developing partnerships with other affected parties to help cost share some of the solutions.

CCBJ: You’ve done climate vulnerability assessments for your headquarters in Arlington, Va., and offices elsewhere. What are some of the key take-home messages from those reports? How have you adapted your own business practices in response?

Rubin: One big take-away is that you can’t simply hire a chief climate officer or chief sustainability officer and then dust your hands off and say “well, that climate problem has been taken care of.” Among other things, that person may become his/her own stovepipe, such that climate solutions may become integrated with the company’s operations but are never really fully understood, appreciated by or acted

upon by its people.

Our approach has been to create a Green Vision Council, which is a group of staff members that rotates every six months. Our CSO advises the Council and receives recommendations from it. During each six-month period, that group of staff members comprising the Council feels the full impact of trying to come up with sustainable and climate-ready solutions on behalf of the company.

In this way, the idea of climate change as a business risk becomes more than an intellectual idea—it becomes a part of the company culture.

A second big take-away has to do with where you sit in the community and its level of preparedness. After participating in and then seeing the outcomes from our first company climate adaptation strategy, we realized that many of those outcomes depended not just on our company being prepared but on the state of preparedness of the communities in which we reside.

This led us to launch what we now call the CLEAR plan—Climate, Environment and Readiness—at our principal office in Fredericksburg, Va. We are working together with the University of Mary Washington and all five planning districts in our region to launch that plan and take our region to a higher level of climate readiness.

We were also successful in launching a Green Business Advisory Council which provides advice to the regional Chamber of Commerce, and in gaining the Mayor’s signature on and commitment to enactment of the Mayor’s Climate Protection Commitment.

In terms of our own business practices, we recently became the first service provider in the US to be certified under the P-391 General Sustainability Criteria developed by the National Standards Foundation. The steps leading up to our Platinum certification (the highest

obtainable) helped support with hard metrics some of the good sustainability decisions we’ve made over the past 12 years since inception as a company. ⚙️

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