BARRY STERLING

Barry Sterling is the Founder, President, and CEO of SkyDrill Power Systems, LLC, a Texas company founded in September 2007 to realize the vision of building and integrating better renewable energy systems for the urban, commercial/industrial, and government marketplaces. With his academic achievements in engineering, government, and geography, Sterling successfully positioned himself to network in the technology and political arenas. His drive has not only been demonstrated by his work in academia but also on the football field as a collegiate athlete. Coming from a lineage of entrepreneurs, Sterling's father Richard Sterling was a serial entrepreneur with five family-owned businesses. Before founding SkyDrill, Sterling was a founding member at Air Quality Solutions Incorporated (AQSI), a startup environmental consulting firm. Sterling served in the United States Army's 3rd United States Infantry, "The Old Guard." He was hand selected to be the Aide-de-camp to the Regimental Commander and was Soldier of the Quarter in 1998 and Soldier of the Year in 1999.

CHRISTINE PARTHEMORE: In our report we had a list of recommendations specific to the bureaucracy, to the different departments. As far as DOD is concerned, one of our potentially controversial ones, that we've gotten a fair amount of pushback for, was that DOD should become a key voice on energy security. Some people are comfortable with DOD taking the role of sort of – not an advocate, but pushing the country forward instead of following or whatever. Some people think that's appropriate because it has the biggest budget, it has a big strategy shop, it needs energy and depends on these things and it creates a big vulnerability. So, based on your experience, do you think DOD will be comfortable in that role if it's asked to take sort of the lead on energy initiatives and be a key player in developing a national energy security strategy? Do you think they're set up to do that? Do you think people there might be amenable to it?

BARRY STERLING: I'll try to answer this in several parts. First, I think DOD has the ability to be a lead on a national security – on a national energy security policy front. But, I think some of the, I guess the old guard in the Pentagon are going to be resistant to such change. I'll use an example from a conversation I had with the Chairman of GreenHunter Energy. He's an old oil guy, and now he's got a company that's really focused on refining biofuels, a lot of different things like that. They own assets, the develop wind farms, they're looking at doing solar. The reason that they got into the business they're in now is because they felt that there was a huge opportunity from the perspective of increasing the revenue and the valuation of their company. The Air Force is heavily involved in developing its fuel consumption, its fuel policy, in trying to implement and utilize biofuels within their fleet. And they've taken great strides; Paul Bollinger, now with the Army, was one of the guys who led that initiative in the air force. So they put out a recommendation, or actually a request, and they're going to have an RFP that talks about purchasing 300,000 gallons of biofuel, jet fuel, JP8 fuel. Well, the largest refiner of that type of fuel in the country, or the one that has the largest capacity to refine that type of fuel didn't even know that the Air Force was requesting a 300,000 gallon order for that type of fuel, which would represent greater than 60% of the market, and, so, fundamentally I think that speaks to what the DOD has to overcome. One, it has to overcome the public, and the market, and its adoption of renewable energy, energy policy – and then the DOD has to really take a focus and push these policies onto the private sector. And I feel that the most important part of that is that DOD should not only feel that they have a mandate to do so, they have the responsibility to do so because they're the largest consumer of energy in our country.

PARTHEMORE: Do you think that the policy folks at DOD, based on your experience, will feel comfortable working in the interagency and with the White House, if it's based out of there, on formulating national strategy, and possibly taking a lead on that based on their experience? And do you know, in the abstract, is it your experience that there's a feeling that, "we need to run our own shop," or ineptitude, or the executive level-

STERLING: I think one, I think DOD's going to interact really well with the new administration and executive office of the president. One, with the national security advisor, with the director of national intelligence, and their military backgrounds, you're going to see a lot of policy, a lot of strategy that's going to come out of DOD that's going to be well received by the Executive Office of the President. The only real component that I see that could a detractor is the "interagencies" within DOD. There's going to have to be a strong leadership component from top down on DOD to communicate what the strategy is for the entire Department of Defense to each of the branches of the military. So each branch is coming up with their own policy, their

own plans, And best practices for the Air Force may not necessarily be best practices the Army, and best practices for the Army may not be best practices for the Navy. The reality is once you identify what the best practices is for different, or for each energy policy that you're dealing with, it really should be best practices for the Department of Defense. So there's going to have to be a clear top-down approach and clear dissemination of what the best practices are for each of the branches.

For example, the Air Force built the largest solar, utility-scale solar facility to date within the DOD: fourteen megawatts at Nellis Air Force Base. The way that was constructed by SunPower and funded through other private entities is that the Air Force: Here's your land, SunPower builds the facility, and the Air Force base, Nellis Air Force Base, purchases all of the power. Well, that is what we would consider, in my experience, best practices because the Air Force has an actual, what we would call "skin in the game," because they're the off-taker. Now the Army is, through its different policies and what it's trying to achieve from what I would call a "utility-scale solar," the Army is doing things a little bit differently. The Army is building out, wants to build out utility-scale solar, but they don't want to be the off-take. They don't want to purchase any of that electricity. In fact, they want to have the electricity generated from that utility-scale solar facility given back to them in exchange for the plant, the company that owns the plant, being allowed to lease the land. So in fact, it really destroys the bottom line of the company they want to actually get to build a utility-scale solar facility. So private industry like myself, we're not really very interested in that project, although it's a great piece of land. But we're not because the transaction cost is too high, and the Army doesn't have a vested interest because they're not purchasing any of the power. The Air Force – best practices; the Army – not best practices. And as a result, the Army, which has a larger amount of land available to private industry to go and do these types of projects, is going to have a hard time getting these types of projects done, because their best practices are not in keeping with what we would – their approach to this is not what we would call best practices.

PARTHEMORE: Do you have confidence that that can be overcome-

STERLING: Yes

PARTHEMORE: What do you think the solution is? Is it, just as you said, OSD has to wrest control of it all and send the orders down from the top there? Or just coordinating the services?

STERLING: I think it does. I think the office of the Secretary of Defense has to be able to deliver top-down best practices. They also need to get DARPA involved; the research and development of technology component is – it has to be driving some of the best practices decisions, because we don't want to use outdated technology. We want to use technology that's going to be cutting-edge, or at least industry-accepted as having a shelf life greater than 10 to 15 years. So I think that OSD, whether it's through a DASD that is primarily focused on disseminating these best practices and managing all these projects – they have to bring these energy czars that are in each branch under them at OSD, and they have to disseminate the best practices to these entities, whether it's the Navy and their fuel practices, and they've got to coordinate with the Air Force on their fuel practices; whether it's the Army and the Air Force on how the build a solar farm, a wind farm, or how they use distributed energy. They have to engage those folks now, so that whenever they implement that policy across – because they're

implementing it now and they're making lots of mistakes – so that they can correct those mistakes and also move forward with everybody being on the same sheet of music.

PARTHEMORE: Excellent. We'll scootch over to our recommendation that we make an assistant to the Secretary, or whatever level. And, do you think DASD is the correct level, or Under Secretary? And also, we recommended that somebody be in charge of the whole shebang – energy and climate change considerations considered together – this was our recommendations – and operational and installation energy all be handled by one person, not a separate director of operational energy, just for operational, as the legislation – so, what do you think that position might be? And do you have any thoughts or foresee any challenges or benefits to combining energy and climate change considerations within DOD policy, and then combining operational and installation energy all under one individual or one policy shop?

STERLING: I've kind of looked at the framework of what I would say would be – my recommendation – and who am I to make a recommendation – but what I would say would be the most functional for private industry to interact with – we like to be able to go and talk to the guy in charge, and then them tell us who else is in charge, and then who else is in charge. That way we can know that we're talking to a key decision maker. I think that initially there needs to be one Under Secretary of Defense for Energy Policy. That energy policy can be broad in the sense that it can be energy or energy and environment. Really for us – for me personally environment is a completely, is a different topic. I think if you start co-mingling energy security and generation, fuel consumption, dependence on foreign oil, with pollution, then you've got two different people with two different agendas. They do overlap, so I think an Under Secretary of Energy and Environment, or Energy and then an Under Secretary of Defense for Environment would be great, and then you follow it down with DASDs, and then within each branch there needs to be an Under Secretary-level for the same component, and their direct report is to that Under Secretary of Defense. Yeah that's a lot of different people doing a lot of different things, but it gives us a clear chain of command of, "This person is in charge of energy for DOD, and this is their Army counterpart, this is their Air Force counterpart, this is their Navy counterpart," and then it flows through from there. And I think that that would eliminate a lot of the confusion, and then it doesn't fit with what the legislation says we need to do, but I haven't seen much on – from an energy policy implementation, with the only exception being the Air Force – great job – that has been worth a damn, personally.

PARTHEMORE: And on combining operational and installation?

STERLING: **Operational and installation I do not think need to be combined. Peacetime, yes, operational and installation can be combined. But wartime, I'm a soldier, and the decisions you'll make on energy in the heat of battle is different than the decisions you make on an installation basis. And the cost of fuel, if you're in a wartime environment, operationally, in Iraq or Afghanistan, are on a <inaudible> - you know we were just talking about MEUS, and some of the decisions they have to make are energy-based, operationally-based, you don't want to have to make those decisions while you're also making decisions about an installation. You want to make sure those are separated. [sterling clip #3: icon goes p. 19, after sentence ending "…and Logistics side of the Department."]**

PARTHEMORE: We'll move on to strategy now. From your perspective as a private sector person who's trying to make business decisions based on what the government does, will it be

helpful to have a clear national strategy that's outlined by the executive – at the executive level that you have confidence is being carried out from all the different agencies within government? Are there ways in which that will be helpful or harmful? How might it help you in navigating contracts and your relationships with the government and knowing who to talk to and that kind of thing?

STERLING: **It is absolutely imperative that we, as private industry, understand what the government strategy is with respect to energy security, energy – any type of energy policy. The reason why is because – you know, we've just signed one of the largest stimulus packages – the largest bills – into law in the history of our country. It's the largest. And clear dissemination of the goals and objectives from an energy policy perspective within that legislation is going to be vital for that stimulus package to have the effects that it wants in the private sector with respect to innovation in energy. If we want to take those dollars and use the dollars to shape policy, use the policies to shape the economy, and the economy to really change from an oil, carbon-based economy to a more green-focused economy, we have to have clear dissemination so that business leaders can make critical decisions on what type of strategic relationships they're going to enter into. What type of hires are they going to make? I mean do I hire a former Secretary of the Army that is an oil and gas guy now, or do I hire an Under Secretary of the Army that had a huge energy and environmental policy focus? Well, I'm hiring the latter, and the reason why is because that's going to shape the strategy of my company, so from having a clearly defined energy – national energy policy, it's absolutely critical for the private industry to see that, understand it, and be able to execute their own strategic plans, so that they can better help – I'm going to say this – so that they can spend those dollars more efficiently, to actually implement some of the things that are planned. [Sterling clip #4: icon goes p. 5, after sentence ending "…and the American public."]**

PARTHEMORE: If the Executive Branch were to institute a policy review process – that DOD has in spades – sort of modeled off of that type of thing where there's a biannual or quadrennial or whatever type of review process – would that help in any way? Or is it necessary but would it hurt? Is there a chance that it could send mixed signals or you as a private sector individual feel like there's too frequent shifting in how things go? Or would that be-

STERLING: I understand the premise. One, **you have to worry about scope creep. Once you have the policy outlined, and you have clear goals and objectives and I understand from a private-sector perspective what my scope is, then I want to make sure I'm doing what I'm supposed to be doing and my strategies are aligned, but I don't want to introduce anything outside of that strategy that's going to take me off course. I think a biannual review process of how the strategy is evolved – because strategy, I for one know, strategy is a great word, it's just, it's the idea of what we really want to do that has some clearly defined goals and objectives. So as long as we're not changing the high-level goals and objectives, but we're able to understand what changes are made, I wouldn't have any problem with any review process. I would say that it's imperative that even with businesses of our size – we're a small business but we have a large reach and we have a lot of strategic relationships that are very large companies – as long as we're able to participate in that, as long as we're able to have a voice, and it's not a lobbyist voice, it's a actual voice that can give some feedback on what we see on the local level, the state level, and on the national level, of how the policy**

is being implemented, then a review process is great. [Sterling clip #5: icon goes p. 10, after sentence ending "…and update the strategy."]

PARTHEMORE: Alright, one last thing kind of on that trail. As part of a national strategy we recommended promoting alternative energy sources, renewable portfolios, etc., whatever type it comes in, and investing in new technologies and basic research up to $150 billion government investment over 10 years from the proceeds that are expected to come out from a cap-and-trade program if it's passed. Has the current economic climate – does that affect those goals? If they president lays that out as his strategy, if they pump in money, if they reinvest revenue in those types of things that comes through from a cap-and-trade program, is it still likely to be effective? Would it still affect your decisions, knowing that the government is investing money in those things? Or is there a chance that the economic climate still seems shaky? Or-

[BEGIN SEGMENT TWO]

STERLING: I think, with respect to cap-and trade and revenue generated from that type of legislation, I think first of all, we're going to have to see how the current economic crisis evolves and when it ends. I would hypothesize, or just really guess, that right now that would be a hard bill to pass in Congress. But once we get to the point where that's an acceptable legislative item that the president can push into and get into our law, then the revenue from that – yeah, it definitely will affect our decisions from a private sector perspective. We want to always be – I mean our mantra is to meet our customers' real needs, and we do that through innovation. And so we're always looking for small companies that we can buy that have a great, innovative technology. Or we provide them some sort of assistance to get their technology further down the road – that's what we were initially, was in innovative technology – so we're always going to be looking for ways to take federal money, if it's available to us, and use that to grow our business from an innovative perspective. Now, on cap-and-trade, we need to look at what those funds are going to actually be used for from a research and development perspective. I would be afraid that we would spend those dollars on R&D stuff that's not really going to have immediate impact on one, the economy and two, on the environment. So we don't want to get too radical, we want to look at technologies that actually have some very solid previous research and development that's been done on them, and I would use the funds more for commercialization – let's keep the vehicles that we have in place now-

<Phone Starts Ringing>

STERLING: -For – use those, use the grants and all the funds that we have in place now to do the startup piece, but then use the hundred and fifty billion for commercialization. I think the commercialization is a key component. I'll just keep talking right through it [in reference to the phone].

And that's really what I would like to see that, those funds, because, a lot of times companies get SBIR grants, they get Congressional earmarks, or however they end up getting funded, and they're able to get to a certain point, but then, there's not really that commercialization dollar fund that's there, there's not that "Okay, well you've got a great idea, you've proven that idea. You need $15 million to go to market?" Let's find companies that have technology that's going to impact our society that are ready to go to market and let's get the money in their hands so that they're able to capitalize on it.

[END]