**United States Energy Association Annual Energy Supply Forum**
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Good morning.

Before I begin, I'd like to acknowledge our world class investors and partners at Ivanpah – NRG, Google, and Bechtel, as well as Alstom, without whose support for BrightSource's technology, team and vision, I would not be here today.

I'd also like to thank our customers Southern California Edison, PG&E and Chevron. And to acknowledge the contribution of so many agency staff, clean energy advocates, legislators and regulators. I could probably go so far as to credit some of our project opponents for making us a better company, but I'll save that for another audience and time.

Instead, I'll just thank Barry Worthington for that extremely accurate introduction, which should confirm to everyone in attendance today that I am indeed not John Woolard. John unfortunately cannot be with us this morning, but I am delighted to be able to speak to the question, "How do we get to "all of the above?"

The very phrase "all of the above" speaks to inclusiveness, comprehensiveness – and no resource left behind. On its face, it *seems* like what we used to call common sense. It is, after all, a refreshing yet time-tested American ideal, the marshaling of everything we have to meet our challenges, identify new

opportunities and safeguard the energy future of generations to come.

And yet, like everything else in these days of communication at the speed of Twitter, “all of the above” finds itself the subject of controversy.

A piñata for critics and a lightning rod for conflicting interests.

Criticized as overly broad and insufficiently specific.

Is all of the above – AOTA – desirable? Without a doubt. But how do we get our arms around this thing? What will it take to turn such policy into action, to ensure that we continue to lead as we have always led?

Allow me to offer a few suggestions.

The energy sector is comprised of highly complex and dynamic systems, where points of leverage change over time. Progress in this arena is inextricably linked to our ability to craft rational policies, regulations and legislation that balance the goals of affordability, reliability and environmental stewardship.

How important is affordability? Nationally, high energy prices reduce disposable income, increase costs to businesses, decrease consumer confidence and sap US competitiveness in an age where we must compete globally.

How imperative is environmental stewardship? It ensures our ability to preserve clean air and water, protect our natural resources and species, and adapt to a changing climate.

How important is reliability? To quote an old Ford commercial, it's Job One. Look no further than India, where lack of reliability threw more than six hundred million people, more than half the country, into darkness.

Let me just add that energy security and energy independence are two objectives that I consider falling under the heading of reliability.

"All of the Above" must reflect a combination of short, medium and long term policy objectives, geographically and technologically diverse - and financially hedged. Fundamentally, it's about balance, and the real costs associated with failure to maintain such balance.

I know the political consequences of such failure first-hand. Consider that Governor Schwarzenegger, under whom I served as Chairman of the California Energy Commission, was elected as the result of a recall campaign prompted by his predecessor's inability to keep the lights on during the California energy crisis.

In the energy sector, effecting meaningful, positive change requires heavy lifting, demanding sustained focus and attention to an immense amount of detail over extended periods of time.

In thinking about this, about the policies it will take to get us to "all of the above," I'm struck by the utility of the letter "C."

"C" as in clarity.

By clarity, I mean formulation and articulation of general consensus around energy policy goals at the local, state and federal levels among decision-makers, policymakers, regulators, and, to the greatest extent possible, legislators.


"C" as in consistency.

And by consistency, I'm referring to messaging, supported by an administration across its constellation of agencies – *over an extended period of time*. Consistency as it applies to plans, initiatives, campaigns and goals.

The combination of these two – clarity and consistency – yields another "C."

Confidence.

Because clarity and consistency build confidence in markets. Only with such confidence can we attract private sector capital and advance worthwhile objectives that can help revitalize the economy, address environmental challenges and increase both energy security and reliability.

Such laudable objectives, while easy to enumerate, also face significant challenges.

At the very top of *this* list is complexity.

Complexity as embodied in the structured transactions, investment and effort required to build large energy infrastructure projects.

Complexity as it relates to permitting processes, mitigation and compliance reporting.

Complexity of a market not well understood by the general public, which gives rise to real political challenges.

And then there's Continuity. The loss of institutional memory – due either to term limits, election outcomes or the constant churn within the public and private sectors - hamstrings efforts toward achieving "all of the above." Nevertheless, we need to find ways to embed continuity into the system.

Finally, there's Courage…or should I say, not enough of it. "All of the above" needs courageous advocates, people who can stand up and persuade the powers-that-be that *this* is the single best way to successfully balance our goals. To succeed, we need courageous leaders willing to work for the common good.

*This* is how it's done.

Now, given the persistence and pervasiveness of these challenges, you would be reasonable in thinking that crafting a policy of AOTA is little more than a lofty aspiration.

You would be reasonable – but you would be wrong.

I'd like to tell you about Ivanpah, the world's largest concentrating solar power project, now more than sixty percent complete, and something I know a little bit about.

Ivanpah is a shining example of BrightSource ingenuity, which integrates proprietary solar technology with conventional components to deliver highly reliable, renewable power.

Our software-controlled field of heliostats, or mirrors, actively harnesses solar energy, concentrating sunlight on a solar boiler mounted on a central tower, or "power tower." The boiler produces high-pressure, high-temperature steam, which powers a turbine to produce electricity.

When it's complete next year, Ivanpah will produce three-hundred-seventy-seven megawatts of clean, reliable electricity, powering more than one-hundred-forty-thousand homes.

Located in Ivanpah Dry Lake, California, the three-unit power system is being built on thirty-five hundred acres of Federal land and has created more than twenty-one-hundred jobs for construction workers and support staff.

That's worth repeating: twenty-one-hundred skilled, high-paying, family wage jobs - where the majority of the project components are procured domestically from a supply chain across 17 states.

In August, Ivanpah received a very special visitor – President Bill Clinton. He shook hands with construction workers and admired their progress on the project, as well as their elaborate tattoos. Speaking at a conference later that day, he remarked, "Those construction workers are the people who are going to make the difference in moving the clean energy industry forward."

But wait, as they say, there's more. Over its project life, Ivanpah will generate more than four-hundred-million dollars in state and Federal tax revenues. Total employee earnings are estimated at $650 million. Consider, too, that those benefits flow back into the local economy.

That's a great example of investing in domestic energy and job security.

Correspondingly, we've developed an approach to construction we call SustainOne, which sets new standards in environmental stewardship.

For example, we adapt to the contours of the land by setting 173,000 pylons into the ground for our heliostats. This eliminates the need for extensive grading while maximizing retention of existing vegetation and natural features.

Additionally, we use air-cooling to minimize our water consumption by more than ninety percent when compared to other technologies. How little is that? By way of comparison, the Ivanpah project will consume the same amount of water per year as two holes at the golf course located adjacent to the site.

As we move forward, we're adding thermal energy storage to our projects. Storage fundamentally transforms a variable resource into a flexible, dispatchable generator, producing electricity cost-competitively after the sun goes down, increasing plant utilization and improving reliability.

In short – we deliver higher value to energy consumers while accommodating increasing levels of variable generation such as wind and solar PV onto the grid.

As a company, we're progressing methodically through each technology generation, balancing improvements against increased technology risk while reducing costs.

Scheduled for completion next year, Ivanpah is literally and figuratively a powerhouse.

It is also a shining example of energy policy gone shockingly…right. So what makes sense? Let's start with the loan-guarantee program.

Good policy.

By the way, this might be a good time for full disclosure: The Ivanpah project is the recipient of a $1.63 billion Department of Energy loan guarantee, backed by twenty- and twenty-five year contracts with P G & E and Southern California Edison.

Under the same loan guarantee program, the DOE has made two conditional commitments totaling $10.3 billion for nuclear plants. Consider, too, that loans paid back with interest are also an investment.

This summer, the Senate Finance Committee explored ways to optimize renewable energy incentives and, as part of the extenders package that passed, the Committee provided a one year extension for the Production Tax Credit. They also included several key benefits:

• Allowing a project to "commence construction" by the end of 2013 in order to qualify for the credit
• Allowing the PTC technologies to opt into the Investment Tax Credit and claim a full credit

That package received a bipartisan vote of 19-5.

The "commence construction" provision is a more flexible and predictable standard than "placed in service." This language allows for the full and efficient utilization of a tax credit, rather than creating artificial and market distorting deadlines that occur well in advance of the scheduled expiration.

We think this is smart policy and it will help drive more private sector investment and job creation. This is a good thing. And it's a good thing that ought to be applied across the entire renewable

energy portfolio. Policy should provide a level playing field rather than picking winners and losers.

Clean energy projects often require multi-year development timelines. This is especially true for utility-scale solar projects which must navigate significant and time-consuming financing, siting and permitting issues and can take three to four years to complete.

As passed, this "commenced construction" language does not extend to solar. Unless it is changed, solar developers, who can only qualify for the Investment Tax Credit, will be at a competitive disadvantage vis-à-vis other renewable energy projects covered by the PTC.

If we are to truly pursue an "All of the Above" policy, the "commenced construction" language should apply to all clean energy incentives, regardless of technology.

In poll results released this week by Hart Research, conducted on behalf of the Solar Energy Industries Association, voters consistently express a strongly favorable view of solar energy. More specifically, nearly four out of five all voters, and nearly two out of every three Republicans, support federal incentives for solar even after a year of Solyndra headlines.

Later this year, I think there will be an opportunity to provide equal treatment of all renewables, including solar and others. I sincerely hope Congress and the Administration will consider this common sense policy and I know that we – and our solar colleagues – stand ready to assist however we can.

BrightSource's solar thermal technology is not limited to generating electricity, but rather as technology that has broad applicability into other sectors.

Technology that actively takes into account “all of the above.”

Already, BrightSource is applying solar thermal technology to thermal enhanced oil recovery, or EOR.

In many places, natural gas has fueled EOR operations using steam injection. In fact, it’s estimated that twenty-five percent of all natural gas consumed in California is associated with EOR operations. At their Coalinga facility near Bakersfield California, Chevron has a demonstration project underway using BrightSource technology for steam production.

Elsewhere, we’re bringing our technology to bear as a means of hybridizing natural gas or coal plants as a way to help reduce carbon intensity.

Globally, the opportunities to use solar for EOR are tremendous, considering many oil producing regions have no access to natural gas infrastructure. Not to mention the potential for solar steam to be used in other processes such as desalinization.

It’s exciting to see how renewable and traditional resources can work together.

Ladies and Gentlemen, all technologies have a lifecycle.
Without the government support that our technology needs to mature, BrightSource would not be able to scale up, and begin to drive costs down, to eventually take our place among the mainstays at the “all of the above” table.

Let me put it another way.

Funding research and development activities without providing other forms of support along the technology lifecycle would be like sending your child into the workplace upon completing fifth grade.

You say to your fifth-grader, "You know, Sally, you've had a really good year. You're showing us a lot of potential. So your mother and I have decided to cut you loose…we think you can take it from here…so good luck with that whole maturation thing…we're sure you can do it without us.

Who are we kidding here?

The fact is, government has always employed a variety of incentives to encourage the development of all domestic energy resources at the state and federal level. Such incentives include direct subsidies, tax breaks, market support, technology demonstration programs, research and development (R&D) programs, procurement mandates, information generation and dissemination, technology transfer, directed purchases, and government funded regulations.

These represent nothing less than the lifeblood of success for emerging technologies in the energy sector.

Exhibit A? Shale gas.

Government policies — including federal R&D funding, public-private demonstration initiatives, and production incentives for maturing, pre-competitive energy technologies — played a role in advancing some if the key energy innovations required to unlock U.S. shale gas reserves. Here, support over time in concert with significant private sector investment has led to a complete market shift that today is contributing to a dramatic increase in American energy security.

In much the same way, policies that support renewable technologies like ours will pay off in the future.

We are now approaching a century of government support for fossil fuels. In 1913 Congress enacted a depletion allowance tax deduction for oil and gas. In 1918, following World War I, the discovery value depletion method was authorized. And in 1926, percentage depletion replaced discovery value depletion, under the 1926 Revenue Act.

Whether you consider such support subsidies, incentives, legitimate business expenses or entitlements, we need to have an honest dialogue about the role of government and recognize that it will always have a role to play within the heavily regulated energy sector.

Some ground rules:

The policies must be real-world; taking into account that technology advances faster than policy, but ensuring that all worthy technologies are supported at various stages of their life cycles.

Policies must recognize that business decisions are aided and abetted by regulatory certainty. California's Solar Initiative was a success precisely because it enjoyed ten years of such certainty. Politicizing energy is not the way America works, but it's the way we've been behaving.

It wasn't that long ago, but I recall when the Energy Act of 2005 enjoyed broad bipartisan support.

Regardless of your politics, folks, we need to get back there.

Digging a bit deeper, we need to apply best local, state, and international policy and practices to federal policy. And build workable, predictable permitting processes.

Leverage the power of federal regulatory agencies constructively in support of national energy policy objectives – working with industry, not against.

And establish clear benchmarks and metrics to measure progress and adjust strategy.

I encourage all of us to take a cue from Silicon Valley. Don't punish risk taking. Recognize that failure is an acceptable outcome – one that allows innovation to flourish.

By way of example, the Department of Defense has spent hundreds of millions developing the HTV-2, a new hypersonic vehicle designed to strike targets anywhere in the world within an hour. But there was no public outcry when it failed not once, but twice, during recent test flights. And appropriately so.

This same sense of perseverance must hold true for the energy sector, which Congress recognized when it allocated those dollars in the loan guarantee program and DOE continues to recognize as evidenced by its SunShot Initiative.

Let me close by highlighting what I believe to be the bigger issue: The enormity of our energy challenge is much starker when viewed from a global perspective.

According to the Energy Information Administration, world energy consumption is set to increase by fifty-three percent between 2008 and 2035.

And energy poverty is epidemic: Over one-point-three billion people are without access to electricity and two-point-seven billion people are without clean cooking facilities.

A few years ago, I sat in a meeting in DC when an unnamed representative of the European Union pronounced to a group of us that the climate problem was all America's fault - that our big houses, big cars and big-screen TVs created unrealistic expectations among the rest of the world.

My response: Many in the rest of the world would like to have our standard of living, with all its attendant comforts and conveniences from an economy powered by energy.

And they have every right to that expectation.

We should not bet against human nature, or the universality of the American Dream. Globally, "all-of-the-above" requires all that we can bring in terms of leadership, vision and innovation.

As I mentioned at the outset - AOTA - "all of the above" speaks to inclusiveness, comprehensiveness – and no resource left behind. On its face, it *is* common sense. Let's commit to turning policy into action.

Making intelligent energy choices. And supporting those choices we make.

In service to the goals of reliability, affordability and environmental stewardship.

Starting now. Thank you.