

**Remarks by  
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**Introduction**

Thank you.

I'm going to focus on several areas where we see significant opportunities from the perspective of a major energy utility. Because of where our company is located, we have the good fortune of having a lot of first-hand practical experience with some of the longest running policies and practices in areas like energy efficiency and renewables.

But first, I'd like to applaud the presentation we just heard from McKinsey.

In conversations with other business leaders, I've heard more times than I can count that it's impossible or impractical to make much headway on greenhouse gases until we have better technology.

That is not the case. It's a red herring. Technologies are available and in use today that can make a significant difference. And the McKinsey findings drive that home -- as does the actual progress that California has made over the past 30 years.

The biggest obstacle right now is a lack of will – not invention. For example, the idea that coal-dominant utilities can't do much – and shouldn't be asked to do much – until we find an answer on carbon capture and storage is absolutely wrong. I agree an answer must be found, but as the McKinsey study shows, and

we and others have proven, there is much that can be done in the interim to address climate change.

Now, before I'm accused of oversimplifying, let me be clear – this is not to say there aren't tough decisions and trade-offs. There are. We have to re-evaluate whether we're using standards, incentives and other regulatory mechanisms to drive smart, long-term outcomes. We have to be willing to break from some deeply entrenched policies. But if we are as serious about climate change as many business leaders say they are, then we have to start talking about and taking accountability for these choices, rather than pretending our hands are tied until we clear future technology hurdles.

With that...let me move to how we should be thinking about opportunities.

The first thing to remember is that climate is a long-term challenge. If we're nearsighted in our thinking, we're going to make a lot of bad choices – both financially and environmentally – because we'll misunderstand the risks and opportunities – or miss them altogether.

This is one reason why I am convinced that the federal government should set long-term national targets and timetables for reducing greenhouse gases.

It would create clarity for business. It would create a basis for a national cap-and-trade program, which we strongly support. And it would create a context for thinking about the issue in the most constructive and logical way.

The second point to remember is that this is an exceedingly complex issue. We sometimes talk about “the climate challenge.” But it's really not a single challenge. It's sprawling web of challenges. And to really identify the risks and opportunities, you have to peel back all of the layers, understand all the touch-

points and carefully construct a holistic suite of strategies and tactics that take into account the full measure of the problems.

Let me shift to a couple of areas where the opportunities are substantial if we do all of this intelligently.

### **Energy Efficiency**

When we think about the opportunity in the energy sector, we focus first on energy efficiency. Some people have nicknamed it the fifth fuel for energy production. But we view it as the first fuel – because it's highly cost-effective, it's relatively fast, and it's achievable with existing technology.

If this is true, though, it's reasonable to ask why we haven't seen greater progress.

California has kept per capita energy use flat over the past 30 years. But the rest of the country has seen a 50 percent increase. This has allowed us to avoid building 24 large power plants that would have otherwise been needed to meet that demand.

We think the answer is that there is still an enormous untapped opportunity in the rest of the country. Other states can make the same kind of leaps if they create and align the right incentives to really unlock the potential of energy efficiency. This is one of the first places we should be looking now to jump start progress.

The key in California was smart policy that aligned all the incentives. We adopted aggressive standards for buildings and appliances. We funded programs to help commercialize more efficient technologies. And we decoupled utility earnings from sales.

I want to focus on this last point, because it's one of the most important opportunities out there – and yet it's still one of the least understood secrets of California's success. We want to change that. And investors should want to change it as well.

It's a simple idea. Under decoupling, utilities collect a fixed level of revenue, regardless of their actual energy sales. If energy sales are higher than the target level, the excess revenues go back to the customer. And if sales are lower than the target, utilities recover the shortfalls the following year. Utilities are still responsible for managing their expenses, but this neutralizes the perverse incentive that most utilities have to sell more energy.

It should be obvious that if we're trying to drive down greenhouse gas emissions, it's counterproductive to reward utilities for increasing use of the product. Stated alternatively, today most utilities make more money by building more power plants and selling more kilowatt hours. I can promise you that no management team will ever line up lock, stock and barrel behind energy efficiency as long as it is counter to their financial interests.

So we have to realign those interests. Step 1 is decoupling – and step 2 is replacing the sales incentive with an opportunity to earn a return on in energy savings instead. This is what California has done. PG&E has the potential to earn more than \$100 million in incentive payments over the next few years if we achieve aggressive energy efficiency targets, which I'm optimistic we will.

There's no reason we can't replicate this progress elsewhere. And we're pushing this aggressively with regulators in other states and others in our industry. But frankly, progress is slow. A significant reason for this is that it requires a substantial change in mindset on the part of both utilities and regulators.

From an investor's perspective, decoupling provides an increased level of predictability in utility earnings. Our experience has been that investors find this attractive.

It also focuses management on the customer and on innovation, as opposed to just putting more capital in the ground. Our team is constantly looking at new products and services. And we see ourselves as a value-creator for customers, not simply a commodity provider. A note here, in our economy, those who make the most money and have the highest margins are those who provide the most value, not just a simple commodity.

At PG&E, we have an emerging technologies program targeting the commercialization of more than 60 energy-efficient, end-use technologies, including energy saving cooling systems for data centers and high-performance lighting for classrooms. In fact, through existing technology and these types of emerging technologies, we project that we can cost-effectively meet about half our load growth through energy efficiency and demand response over the coming decade.

This is a big part of the future in our industry. And I think investors should welcome policies that orient companies in this direction.

But – just to reiterate -- the key in California was more than just mandates. It was peeling back the layers, understanding the barriers and recognizing that we could create significant opportunities for utilities and customers – and the environment - - if we shifted the paradigm and aligned the incentives.

Over the past few decades, PG&E's efficiency efforts alone have saved customers an estimated \$20 billion, and avoided 125 million tons of greenhouse gas emissions.

## **Renewables**

I think we're also beginning to see – like energy efficiency – that renewables need more than just mandates to reach their full potential.

Let me be clear: we strongly support California's renewable portfolio standard, and we've supported a national standard as well.

PG&E has been pursuing the California target aggressively, and expects to meet the 20 percent requirement. Right now, we've signed contracts that will get us to roughly 18 percent – including some of the largest commitments in the world for concentrating solar energy, as well as some of the first contracts for wave power and biomethane.

In fact, we just announced that we're seeking partners for a major biomethane demonstration project to evaluate technologies for creating large quantities of pipeline-quality natural gas. We think this has the real potential to contribute to the state's renewable goals while also providing benefits like reducing greenhouse gas emissions, helping with fire prevention, improving local air quality, and decreasing landfill disposal.

But despite the progress, it's also clear to us that, if the goal is to really turbo charge the development and deployment of more renewables, the RPS requirement alone isn't enough.

Research shows that the potential for renewables in California is enormous. The National Renewable Energy Laboratory studied the potential for concentrating solar power in California and the Southwest. It found that just this one technology could theoretically provide upwards of seven times the energy

needed to serve the state. So why is the state still stretching to get to 20 percent?

When you look closely, the reasons become apparent. We still face significant obstacles. Competitive pricing is an obvious one. But there are also transmission constraints, the intermittent nature of options like solar and wind, uncertainty surrounding the ability of some providers to deliver on contracts, and so on. We have to address these issues in an integrated, strategic fashion that blends incentives, standards, public sector investment, and other mechanisms.

For example, we need a price and a market for carbon so that the real costs of conventional generation can be reflected.

Another example is tax incentives. The federal government can make a tremendous contribution by extending production and investment incentives for renewables for more than one year at a time, and expanding these incentives to regulated utilities. We should extend the incentives long enough to reduce the uncertainty, spur longer-term technology development and encourage fuller deployment. This would send a critical signal to investors to take the long view and commit to these projects.

And finally, we need to support investment in transmission and distribution infrastructure. In all the enthusiasm for renewables today, you rarely hear about the basic infrastructure. It's the forgotten link in the chain. But the reality is that it's one of the biggest obstacles to realizing the potential for renewables. A massive solar farm in the desert is a terrific idea, but if we can't get the power to the customer, it's just a different kind of stranded asset.

### **Role for the Investment Community**

I want to finish with a few comments on how the financial community can help drive progress on climate change.

The financial community can assist us in making progress by supporting calls for transparency on greenhouse gas emissions. Investment analysts should be looking for the same kind of transparency they expect around other risks. We were the first utility to certify its emissions inventory under the California Climate Registry, and we now support a national reporting standard. It's essential for quantifying risk, and it's also one of the basic building blocks for market-based strategies to reduce emissions.

In addition, when analyzing a company, I would encourage the investment community to try to separate those companies that are truly internalizing an understanding of climate change and its impact on their business, versus those that may not be.

There are two questions here. First, is the company engaged in understanding where policy on climate change is headed? I think more and more companies are now doing this. Frankly, that's why we've seen a growing number of them rushing to the table lately.

But the second question goes deeper and may be more important. Namely, is the company running the business with an eye toward the broader changes associated with climate change? Are they following the science? Are they taking steps to adapt to the impacts on natural resources? On energy use patterns? On customer needs? On their infrastructure?

Let me give you a couple of examples.

In PG&E's service territory, hydro power from the Sierra Mountains is a critical piece of our power mix. We're looking very closely at forecasts for climate

impacts on the Sierra snow pack, and we're starting to think now about how we would address diminished hydro supplies.

We're also looking at scenarios for how we would address higher temperatures – and thus higher peak power demands. We know we need to find ways to reduce the peaks in the future. This is one reason we're working hard to increase demand response programs. It's part of the reason we launched the country's largest deployment of Smart Meter technology – 10 million new electronic meters. And it's a reason we're exploring plug-in hybrid cars, which could potentially supply power back to the grid when they're not on the road.

In fact, we just announced a partnership with Raser Technologies to demonstrate plug-in hybrid sport utility vehicles. We are also working with Tesla Motors to test smart charging devices to learn how these electric vehicles can help us bring additional renewables onto the grid during peak hours.

I am confident that companies that are asking these questions now are going to have a much richer understanding of the long-term risks and opportunities. And they will be substantially ahead of the game because of it.

If the investment community begins to recognize and reward this kind of thinking, it could go a long way. It would drive innovation. It would help the industry and our country turn the corner on this challenge – at the same time, creating significant value and growth opportunities.

Thank you.

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