Testimony

of

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before the

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of the

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on

Natural Gas Forum: Infrastructure, Transportation, Research and Innovation

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Chairman Wyden, Ranking Member Murkowski and members of the Senate Committee on Energy and Natural Resources. My name is Jesus Soto, and I am Senior Vice President of Gas Transmission Operations at the Pacific Gas and Electric Company (PG&E). I am pleased to appear before the committee on the issue of Natural Gas: "Infrastructure, Transportation, Research and Innovation."

PG&E appreciates the time and consideration this committee continues to give to exploring opportunities associated with the production, distribution and use of domestic natural gas.

PG&E is one of the largest combined natural gas and electric utilities in the United States. Headquartered in San Francisco, with more than 20,000 employees, the company provides natural gas and electric service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California. PG&E's extensive natural gas system integrates approximately 42,000 miles of natural gas distribution pipeline and more than 6,700 miles of natural gas transmission pipeline; stretched from end-to-end, our pipeline system would go to Boston and back fifteen times.

A New Outlook for Domestic Natural Gas

America is undergoing a boom in clean energy innovation that is helping to reshape our energy outlook for the foreseeable future. New technologies have helped expand the geography of the U.S. domestic natural gas supply, as well as the quantity of the resource. Meanwhile, various studies indicate that the United States has larger, undeveloped supplies of natural gas than previously anticipated.

We have the potential for a cleaner energy supply, greater energy security and – not least – a stronger economy, with new jobs, a revival of US manufacturing, and healthier trade balances. Moreover, we have the opportunity to provide a more affordable, cleaner and reliable source of transportation fuel for parts of our transportation system.

In addition to being a domestically abundant energy resource, natural gas provides a number of environmental benefits. For example, a report released last month by the U.S. Environmental Protection Agency (EPA) stated that the annual U.S. greenhouse gas emissions decreased by 1.6 percent between 2010 and 2011. This is encouraging news and these recent trends are related, in some respects, to utilities switching to natural gas.

Investing in Energy Infrastructure

But, at its most basic level, there are few things as important as establishing a solid foundation for providing safe, reliable and affordable gas and electric service to America's homes and businesses that depend on it every day. To that end, PG&E strongly believes that this means investing in core energy infrastructure – from natural gas and renewables to smarter electric grids.

With respect to our nation's natural gas pipelines, approximately sixty percent of this infrastructure is at least forty years old. While this may appear to some individuals to be aging infrastructure that needs to be replaced, that is not always the case. What it does mean, however, is that PG&E and companies like ours have to spend more time and resources on pipeline modernization and maintenance.

Natural gas pipeline tragedies, such as the one in San Bruno, CA during 2010, can be a vivid reminder that the gas pipleline industry should take additional steps to ensure that the country's pipelines continue to be safe and reliable. And that requires us to take new steps to modernize our systems and utilize next generation technologies.

PG&E applauds Congress for taking action to pass the "Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011" (now Public Law 112-90). This is an important law that serves as another positive step forward for greater pipeline safety and gas system modernization.

Meanwhile, California and other States continue to take additional steps to redesign their energy infrastructure for modern times, which PG&E supports.

System Improvements to Improve Public Safety

PG&E remains laser-focused on safety. Our pipeline enhancement plan is one of the most comprehensive efforts in the U.S. to ensure the safety of the gas system. Since the San Bruno accident, we've undertaken a sweeping multi-year, multi-billion dollar modernization effort to improve the operations and management practices throughout our gas organization.

To date, we've invested $1.4 billion in a range of initiatives, including:

- Validating the Maximum Allowable Operating Pressure on more than 6,700 miles of transmission pipeline;
- Completing over 435 miles of strength testing;
- Replacing 45 miles of pipeline;

- Upgrading 78 miles of pipeline to accept in-line inspection technology; and
- Automating 67 valves.

PG&E also started construction on a state-of-the-art gas control center at its new Gas Operations headquarters at Bishop Ranch in San Ramon, California. The center will serve as a central location from which PG&E will monitor the safe and reliable operation of its entire gas pipeline system. This new state-of-the-art control center will give us dramatically better visibility into our operations.

Embracing Innovative, Safety-Enhancing Technologies

A major focus of our ongoing modernization efforts is incorporating cutting-edge inspection and maintenance tools including, Pipetel's Explorer self-propelled, battery-powered robot, which travels through a gas pipeline, otherwise unreachable by conventional inspection devices, to identify anomalies in pipe walls. This device can successfully identify, size, and pinpoint dents, metal loss and other issues.

Another example is the Picarro Surveyor™. This device mounts on a car, and is 1,000 times more sensitive than traditional leak detection equipment, so we can find problems much faster and more efficiently. We were the first utility to start using this device, and it's been a tremendous success.

A third example is a corrosion and mechanical damage measurement device called EXAscan. This handheld laser scanner device can be used to produce a highly accurate, 3-D, color-coded view of the pipe. So instead of spending hours to inspect a line, we can see potential safety concerns in minutes.

We have an incredible opportunity today to reshape the country's energy future by making smart investments in core energy infrastructure, including natural gas pipelines which deliver huge economic and energy security benefits. At a time when financing is relatively inexpensive and natural gas prices remain historically low, the utility industry is well-positioned to make common sense infrastructure improvements, which will:

- Foster greater public safety and confidence across our gas systems;
- Accelerate America's economy, including job growth;
- Promote American competitiveness; and
- Help to facilitate a quicker transition to a clean, sustainable and more technologically efficient energy mix.

PG&E looks forward to continuing our efforts and working with the Congress to further address these important issues, as we strive to operate the safest and most reliable natural gas system in the nation.

Again, PG&E appreciates the opportunity to participate in today's forum to explore America's natural gas potential, including innovative approaches to modernize our gas system infrastructure.

Thank you.