



43° 39' 10" N | 79° 23' 52" W

**Toronto-York Spadina Subway Extension**  
Canada

INFRASTRUCTURE

MINING & METALS

NUCLEAR, SECURITY & ENVIRONMENTAL

OIL, GAS & CHEMICALS



**Q: How does Bechtel help its customers solve the world's biggest challenges?**

# Vision, Values & Covenants

## Vision: What we aspire to do

Be the world's premier engineering, construction, and project management organization by achieving extraordinary results for our customers, building satisfying careers for our people, and earning a fair return on the value we deliver.

## Values: What we believe

Building on a family and leadership heritage that spans more than a century, we are privately owned by active management and guided by our Vision, Values & Covenants. We value:

- **Ethics.** We are uncompromising in our integrity, honesty, and fairness.
- **Safety & Health.** We are relentless in keeping people safe from harm, and we provide a healthy work environment.
- **Quality.** We are passionate about excellence and doing our work right the first time. Our reputation depends on our delivered value in the eyes of every customer and community.
- **People.** We inspire each other with important work full of purpose, challenging development opportunities, and rewarding careers. We aspire to be the employer of choice in our industry.
- **Culture.** We actively build a diverse, inclusive, and collaborative work environment where all views are welcomed, openness is encouraged, and teamwork and merit are cornerstones. We are proud of what we do and how we do it—and we enjoy doing it!
- **Relationships.** We build positive, long-term relationships with our customers, joint-venture partners, subcontractors, suppliers, and colleagues that are built on trust, respect, and collaboration.
- **Innovation.** We develop and apply world-class technology. We listen, learn, and seek out the best ideas. We attack complacency and continually improve.
- **Sustainability.** We improve the quality of life in communities where we work by respecting local cultures, engaging local people, and protecting the environment.

## Covenants: How we do it

Wherever we go and whatever we do, we:

- **Demonstrate Integrity.** Exercise the highest level of professional and ethical behavior.
- **Are Respectful.** Treat people with respect and dignity. Listen actively. Communicate in a timely and forthright manner. Never undermine colleagues.
- **Collaborate.** Ask for and welcome help; offer and give it freely. Mutually resolve ambiguity and conflict.
- **Build Trust.** Make commitments responsibly and always keep our word. Be candid while building shared understanding.
- **Deliver.** Set high aspirations, plan responsibly, and honor all commitments.
- **Learn It, Do It, Share It.** Be curious. Seek, share, and build upon experiences and lessons learned.
- **Live Our Culture.** Embrace, embody, and actively contribute to our Vision, Values & Covenants. Nurture a proud legacy.

**A: The most important thing we build on every project is a partnership between our people and our customers. That is our commitment, our history, and our future.**

– Brendan Bechtel, Chairman & CEO



27° 52' 59" N | 97° 16' 35" W

**Corpus Christi Liquefaction** Texas, USA

# Executive Letter

Our customers' projects demand more than elite engineering talent and precision execution. These essentials are just the starting point for success. Helping our customers achieve their goals requires the ability to listen and address their unique needs, the flexibility to adapt when priorities shift, and the agility to overcome challenges in stride.

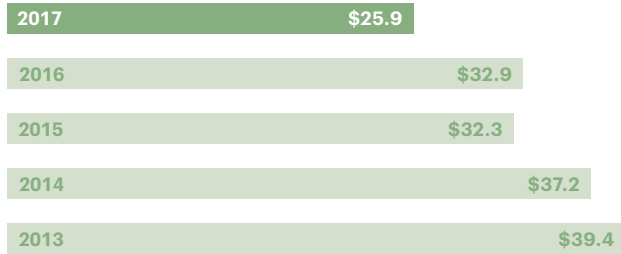
In 2017, we worked to deepen our collaboration with customers worldwide on projects to produce cleaner energy, find solutions for rising transportation and mobility needs, create access to new markets and avenues for growth, eliminate risks to public safety and the environment, and solve other complex challenges. These efforts contributed to many accomplishments during the year, including:

- Completing the Panda Stonewall Power project in Virginia ahead of schedule, one of the cleanest combined-cycle plants in the U.S., capable of powering up to 778,000 homes.
- Helping Cheniere Energy expand production and export of liquefied natural gas (LNG) with new production trains at Sabine Pass in Louisiana and Corpus Christi, Texas.
- Initiating work to expand output at Minera Los Pelambres copper mine in Chile, while protecting local water by building a desalination plant and pipeline to supply the mine.
- Enabling Chevron in Australia to begin LNG shipments from the Bechtel-designed-and-built Wheatstone facility, which will produce 6 percent of the Asia Pacific region's total LNG.
- Continuing progress on construction of the Riyadh Metro project in Saudi Arabia, a historic project that will improve mobility, reduce emissions, and alleviate traffic congestion in the fast-growing city.
- Supporting the Riverside County Transportation Commission to bring the first toll road to California's Inland Empire by managing construction of 10 miles (16.1 kilometers) of new expressway and 32 bridge structures, and the widening of 6 miles of road.
- Completing front-end engineering design and starting construction on the Alba Potline 6 Project in Bahrain, an expansion that will make the facility the world's largest single-site aluminum smelter, exceeding the aluminum production of the entire U.S.
- Breaking ground on the Cricket Valley Energy Center in New York, a new 1,100-megawatt natural gas-fueled power plant that will provide energy for more than 1 million homes.
- Completing a historic, 25-year effort for the Pentagon to safely secure or eliminate Cold War era weapons of mass destruction and related materials and technologies in the former Soviet Union.

For the 20th consecutive year, these and other projects earned Bechtel the top spot on *Engineering News-Record's* (ENR) annual Top 400 U.S. Contractors list, as well as top rankings in several sectors, including first in the petroleum, transportation and industrial sectors, and second in power and hazardous waste.

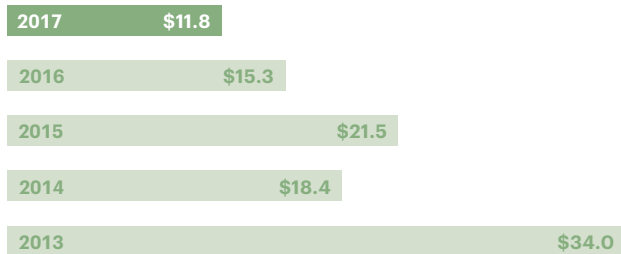
## Revenue

in billions of U.S. dollars



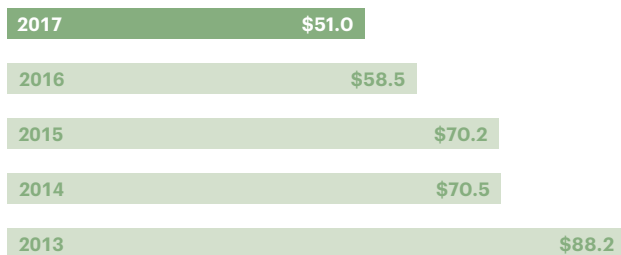
## New Work Booked

in billions of U.S. dollars



## Backlog Revenue

in billions of U.S. dollars



We were also entrusted with new work last year from customers undertaking some of the world's most important and technically challenging projects, including:

- Continuing construction of the first advanced Gen III+ nuclear units at Georgia Power's Vogtle power plant, the only two nuclear units now being built in the U.S.
- Joining with Tellurian in Louisiana to build what will be one of the world's lowest-cost LNG production and export facilities, capable of shipping up to 27.6 million tonnes of LNG per year to customers worldwide.
- Managing delivery of 9.6 miles (15.5 kilometers) of twin-bore tunneling and excavation for six new stations for Sydney Metro, Australia's largest public infrastructure project, modernizing and transforming the city's public transport network to serve a growing population.
- Serving as delivery partner for London City Airport's terminal expansion and construction of a new passenger pier, seven aircraft stands, and an aircraft taxi lane, allowing for a significant increase in flight movements that will create the capacity for an additional 6.5 million passengers.
- Working with the Saudi Arabian government to establish and operate the National Project Management Organization, a new agency that will help deliver complex infrastructure projects in support of the country's Vision 2030 plan.
- Providing project management services on construction of the Tahrir Petrochemicals Complex for Carbon Holdings of Egypt, which will be the country's largest petrochemicals operation.
- Delivering the largest component of London Gatwick Airport's modernization project to create additional capacity and provide greater operational efficiency.
- Working as the development partner on the U.K.'s second high-speed rail line, which is planned to run from Crewe to Manchester.

29° 44' 8" N | 94° 58' 39" W

**ExxonMobil North American Growth —  
Olefins Recovery (NAG-OR) Project**  
Baytown, Texas, USA

“The truest gauge of our success is the enduring quality of our relationships, built on common values, consistent performance, and shared benefits—not only for customers, but also communities, colleagues, partners, and other stakeholders.”



56° 20' 47" N | 95° 11' 49" W

**Keeyask Generating Station** Canada

### **Achieving Our Financial Goals**

Work-off revenue in 2017 was \$25.9 billion. Although there were signs of renewed economic growth and some rebound in commodities, these trends have not yet translated into a corresponding rise in new project awards. We continue to carefully evaluate return on risk, talent, and value delivered. At \$11.8 billion, new work booked declined for the second year in a row, and backlog revenue fell to \$51 billion.

These results were partially attributable to markets still in recovery. It is clear, however, that rising competition demands that we continue to develop leaner, more effective project delivery strategies, and make clear the unique value we bring. Bechtel's technical excellence and track record in helping customers achieve challenging goals remain second to none. As markets continue to strengthen, we are confident these advantages will be rewarded.

### **Putting Safety First**

Safety is our most important responsibility. In 2017, Bechtel co-founded the Building Responsibly coalition to develop and drive stronger worker safety and productivity standards for construction and engineering projects, as well as their supply chains, with a focus on international human rights.

In 2017, our rates of recordable incidents and lost-time incidents were the lowest in the past five years. These results were overshadowed, however, by the tragic loss of three colleagues in separate incidents on our projects. We will continue to identify lessons learned and work to further improve our performance with the goal of zero incidents. In line with our most sophisticated customers, we continue to shift our safety focus from lagging to leading metrics, with a particular emphasis on People-Based Safety, near-miss reporting, and high-potential incidents.

### **Delivering Greater Value**

We also pressed forward with efforts to meet our customers' desire for increased value. Project owners worldwide today face intense pressures driven by competition, the need for capital efficiency, the speed of innovation, and demands for sustainable growth and development. Our goal is to become even more agile, responsive, and efficient at meeting their needs. Through technology innovation, process improvements, and discipline, we are working to reduce project delivery costs by 20 percent and improve schedule performance by 30 percent — gains that will translate into direct benefits for customers.

We are also increasing our continued focus on sustainability. Integrating sustainability into our processes and projects is driving us to find more efficient, smarter ways to work. It's also creating greater long-term value for customers, as well as for communities through efforts such as developing and hiring local workers and catalyzing small businesses. Our enterprise sustainability goals and targets enable us to focus on specific areas that strengthen our enterprise capabilities, elevate our competitiveness, and help improve the industries in which we work.

### **Leading with Innovation**

Last year was the second year of our \$60 million Future Fund program, in which we moved additional innovation proposals from proof of concepts into pilots deployed on active projects. Our colleagues have submitted more than 2,600 ideas, with over 500 ideas in the prototype stage. Of these ideas, 35 have been implemented on 47 projects, for a total of 147 deployments.

In 2017, we created our Big Data & Analytics Center of Excellence (BDAC), an example of the kind of innovation that will drive enhanced performance for customers through the use of machine learning and artificial intelligence (AI). Our data scientists are focused on identification and analysis of data aimed at improving safety and quality, increasing efficiency, optimizing schedules, and improving net present value for our customers.

Examples of exciting solutions we are already testing on Bechtel projects include conducting training using virtual reality to minimize risks, completing more than 400 drone flights over more than 28,000 acres, using AI to radically speed up design processes, improving safety by using wearable sensors to predict and prevent unsafe behaviors, and using 4D and 5D building information modeling combined with AI to determine the safest, fastest, and most effective way to complete construction and improve workforce planning.

### **Investing in Our People**

Bechtel's competitive advantage is our people. We believe that successful companies will be those that excel at bringing together competent and committed individuals with diverse backgrounds and perspectives. It's why we aspire to be the employer of choice for the most talented people in our industry.

It is also the reason Bechtel is implementing a proactive diversity and inclusion (D&I) strategy. We are increasing D&I training for all senior leaders, supervisors, and hiring managers. We have also put in place new interview procedures for job candidates. In addition, we are conducting an enterprise-wide evaluation of gender pay and gender equality.

More broadly, we are creating new programs, tools and training to ensure that our colleagues are supported as they grow their careers at Bechtel, and that we continue

to be a company where the best and the brightest can continually grow their capabilities and their level of impact.

### **Building for the Long Term**

We are proud of what our colleagues achieved last year. That said, we do not measure success by any one year's accomplishments or its challenges.

The truest gauge of our success is the enduring quality of our relationships, built on common values, consistent performance, and shared benefits—not only for customers, but also communities, colleagues, partners, and other stakeholders.

This long view and our commitment to safety, quality, execution excellence, and sustainability informs everything underway at Bechtel today. In keeping with that, this year we have incorporated our annual sustainability reporting with our traditional annual report, reflecting the integral role that it increasingly plays in our business.

Looking ahead, we are confident that our focus on creating long-term value for customers and all of our stakeholders will enable Bechtel to thrive and achieve extraordinary results.

Thank you for your ongoing interest in our company. We look forward to sharing our continued progress.

Sincerely,

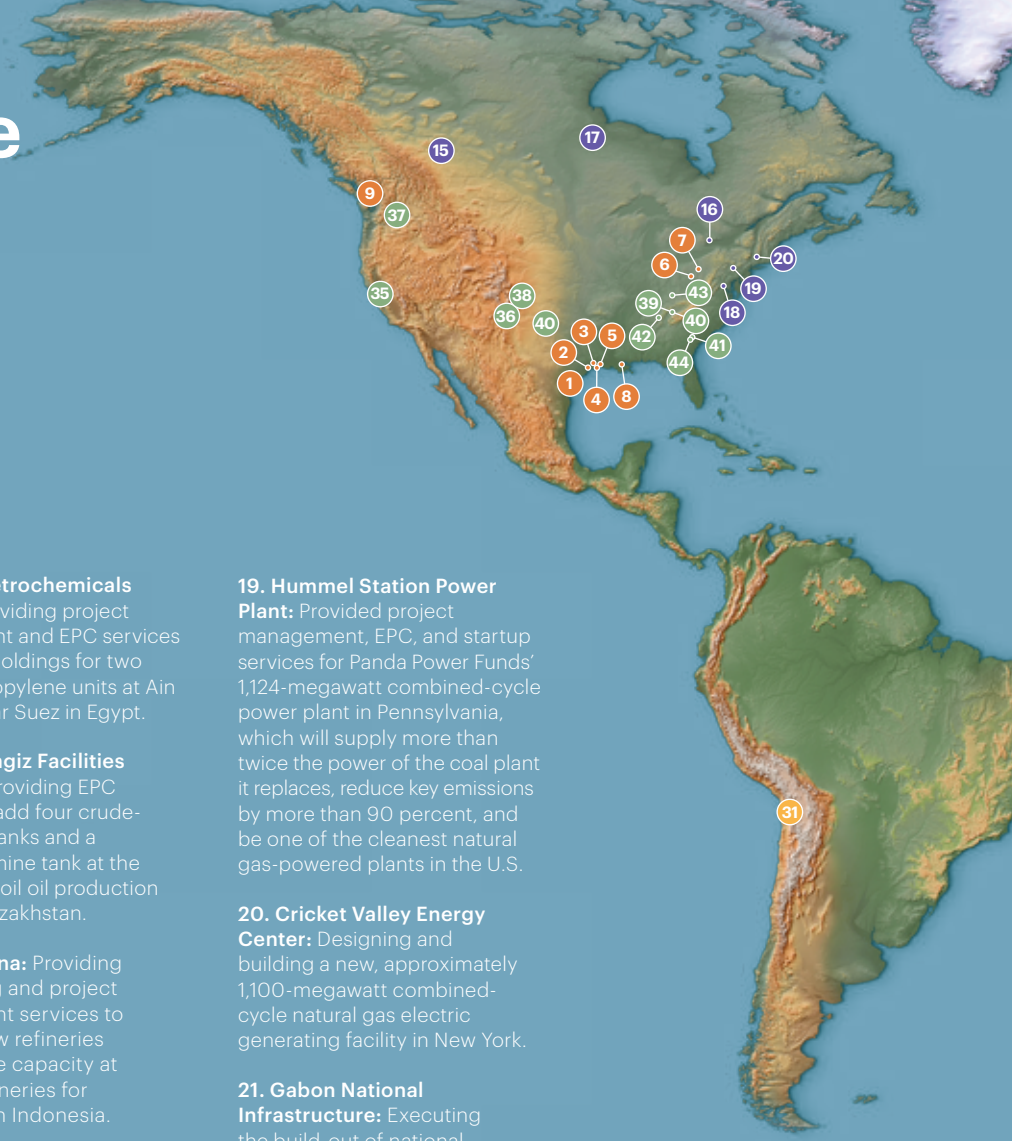
#### **Brendan Bechtel**

Chairman & Chief Executive Officer

#### **Jack Futcher**

President & Chief Operating Officer

# Our Presence



## OIL, GAS & CHEMICALS

### 1. Corpus Christi Liquefaction:

Designing and building three LNG production trains and related facilities, including tanks and marine structures, for Cheniere Energy in Texas.

**2. ExxonMobil North American Growth — Olefins Recovery (NAG-OR) Project:** Building an ethylene plant at ExxonMobil's complex in Baytown, Texas.

**3. Beaumont Scanfining Refinery Upgrade:** Upgrading a refinery for ExxonMobil, applying the customer's proprietary technology to increase motor fuel production.

**4. Sabine Pass Liquefaction:** Designing and building five LNG production trains for Cheniere Energy in Louisiana.

**5. Driftwood LNG:** Designing one of the world's lowest-cost LNG production and export terminals for Tellurian Inc. near Lake Charles, Louisiana.

**6. PTTGC Petrochemical Complex:** Performing front-end engineering and design for a new petrochemical complex for the American subsidiary of Thai PTT Global Chemicals in Ohio.

**7. Pennsylvania Chemicals:** Providing EPC services to Shell Chemical Appalachia LLC for a world-scale cracker facility that will use ethane to produce 1.6 million tons of polyethylene per year.

**8. Garyville Coke Drum Replacement:** Providing engineering and procurement for the replacement of coke drums, gas plant modifications, and OSBL work for Marathon Petroleum at their Garyville refinery in Louisiana.

**9. Tilbury LNG:** Performing EPC for a small-scale LNG facility including new storage capacity for Fortis BC in British Columbia, Canada.

**10. West Nile Delta Gas Processing Terminal:** Providing EPC services to BP for an onshore gas-processing plant near Alexandria, Egypt.

**11. Tahrir Petrochemicals Project:** Providing project management and EPC services to Carbon Holdings for two new polypropylene units at Ain Sokhna, near Suez in Egypt.

**12. TCO Tengiz Facilities Upgrade:** Providing EPC services to add four crude-oil storage tanks and a 4,000m<sup>3</sup> Amine tank at the Tengizchevroil oil production facility in Kazakhstan.

**13. Pertamina:** Providing engineering and project development services to develop new refineries and improve capacity at existing refineries for Pertamina in Indonesia.

**14. Wheatstone LNG:** Designing and building a two-train LNG plant and related facilities for Chevron in Western Australia.

## INFRASTRUCTURE

**15. Edmonton Valley Line Light Rail Transit:** Constructing the Valley Line Light Rail, an 8-mile (13-kilometer) route with 11 new stops and one station.

**16. Toronto-York Spadina Subway Extension:** Completed management of the city's 5.3-mile (8.6-kilometer) subway system extension.

**17. Keeyask Generating Station:** Leading a partnership in Manitoba, Canada, to build a seven-unit powerhouse, concrete spillway, 1.4 miles (2.2 kilometers) of earth dam structures, and 14.3 miles (23 kilometers) of dykes.

**18. Panda Stonewall Power:** Designed and built a greenfield, state-of-the-art, 778-megawatt combined-cycle power plant for Panda Power Funds in Virginia.

**19. Hummel Station Power Plant:** Provided project management, EPC, and startup services for Panda Power Funds' 1,124-megawatt combined-cycle power plant in Pennsylvania, which will supply more than twice the power of the coal plant it replaces, reduce key emissions by more than 90 percent, and be one of the cleanest natural gas-powered plants in the U.S.

**20. Cricket Valley Energy Center:** Designing and building a new, approximately 1,100-megawatt combined-cycle natural gas electric generating facility in New York.

**21. Gabon National Infrastructure:** Executing the build-out of national infrastructure to support sustainable economic development for the government of Gabon.

**22. Crossrail:** Supporting the completion of design and construction of twin 13-mile (21-kilometer) tunnels, and integrating rail and station systems in London.

**23. London City Airport:** Managing the development program to expand the existing terminal and build a new passenger pier, seven new aircraft stands, and a new aircraft taxi lane.

**24. Gatwick International Airport:** Supporting delivery of a major capital investment program, while keeping the airport operational for more than 43 million passengers per year.

**25. Kosovo Motorway:** Building Route 6, a new 37-mile (60-kilometer) motorway linking the capital, Pristina, to neighboring Macedonia for the government of Kosovo.

**26. Riyadh Metro:** Designing and building two metro lines in Saudi Arabia's capital for the High Commission for the Development of Arriyadh.

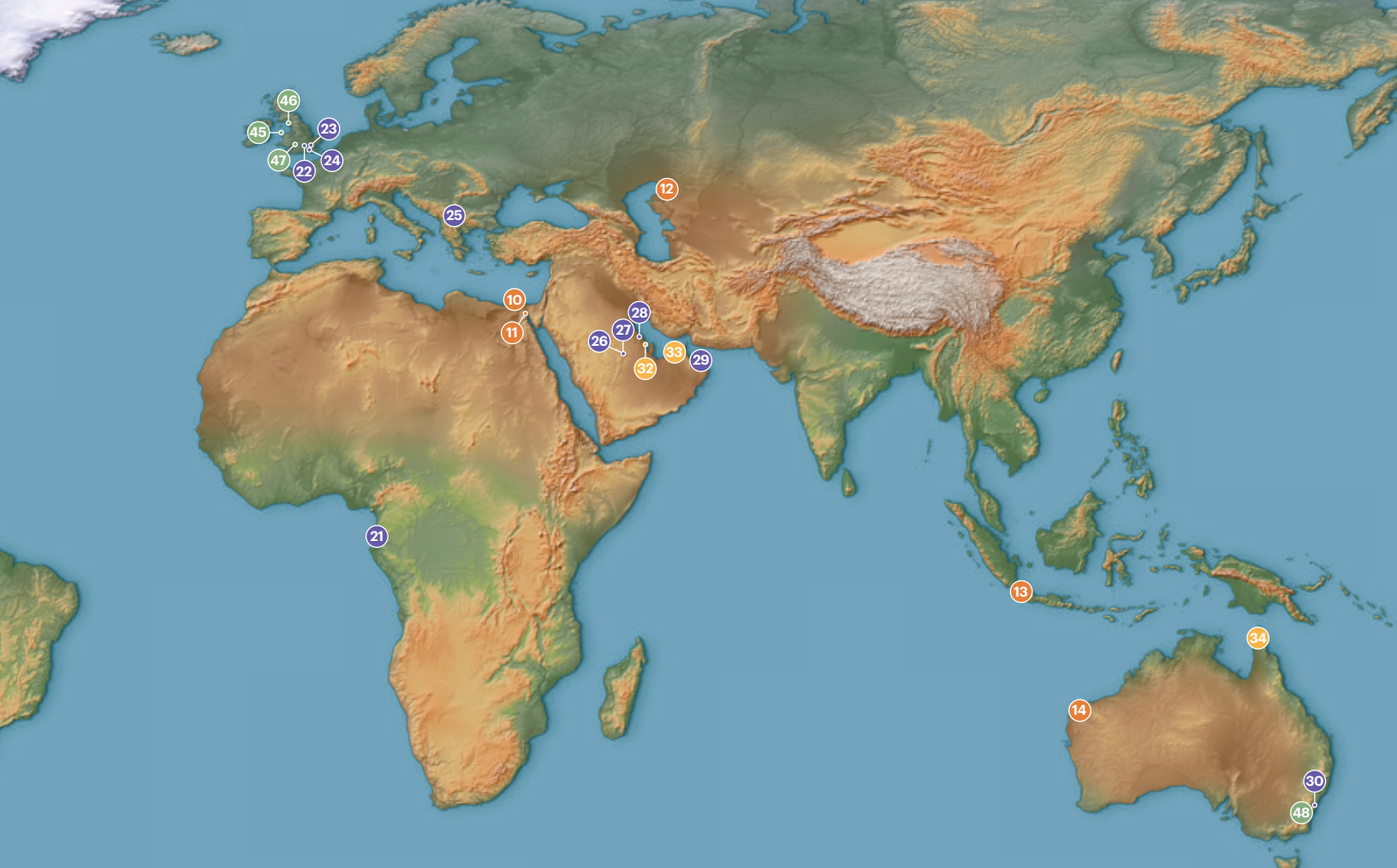
**27. National Project Management Organization:** Supporting the development and operation of a new government organization in Saudi Arabia to support effective delivery of complex infrastructure projects.

**28. Jubail:** Managing services work at the world's largest industrial development project — Jubail and Ras Al Khair industrial cities.

**29. Muscat International Airport:** Performing EPC services for the award-winning new 28-gate international terminal and associated facilities for the government of the Sultanate of Oman.

Reflects projects underway in 2017.





**30. Sydney Metro:** Managing the delivery of 9.6 miles (15.5 kilometers) of twin-bore tunneling and excavation for six new metro stations for Stage 2 of Australia's largest public infrastructure project.

**MINING & METALS**

**31. Quebrada Blanca Phase 2:** Providing EPC management services for the Quebrada Blanca mine expansion that will increase the ore-processing rate by 140,000 tonnes a day.

**32. Alba Line 6 Expansion Project:** Providing EPC management services for an expansion project in the Kingdom of Bahrain that will make Alba the world's largest single-site aluminum smelter.

**33. Al Taweelah Alumina Refinery:** Providing EPCM services for a greenfield alumina refinery in partnership with Petrofac Emirates for Emirates Global Aluminium.

**34. Amrun:** Building a bauxite mine and its associated processing and port facilities to expand output at one of the world's largest bauxite deposits for Rio Tinto in Australia.

**NUCLEAR, SECURITY & ENVIRONMENTAL**

**35. Lawrence Livermore National Laboratory:** Managing and operating, alongside the University of California, one of the U.S. Department of Energy's most important national security laboratories, which employs more than 6,000 people.

**36. Los Alamos National Laboratory:** Managing and operating a premier U.S. Department of Energy facility for national security and scientific research at one of the world's largest multidisciplinary institutions.

**37. Hanford Waste Treatment and Immobilization Plant:** Designing, constructing, and commissioning the world's largest and most technically sophisticated radioactive waste treatment plant, for the U.S. Department of Energy.

**38. Pueblo Chemical Agent-Destruction Pilot Plant:** Designed, built, systemized, pilot-tested, and now operating; later closing a first-of-its-kind plant that will safely destroy mustard agent inside munitions stored at the U.S. Army Pueblo Chemical Depot in Colorado.

**39. Uranium Processing Facility:** Constructing a multibuilding, state-of-the-art complex for enriched uranium operations related to nuclear security.

**40. Consolidated Nuclear Security — Pantex Plant and Y-12 National Security Complex:** Managing and operating U.S. manufacturing and nuclear weapons assembly/disassembly facilities in Texas and Tennessee to ensure a safe and effective national nuclear weapons deterrent.

**41. Savannah River Remediation:** Treating Cold War liquid radioactive waste and closing underground tanks for the U.S. Department of Energy's Savannah River Site.

**42. Arnold Engineering Development Complex:** Leading the test operations and sustainment for the engineering complex at the Arnold Air Force Base, supporting ground testing of nearly every new U.S. air or space system.

**43. Blue Grass Chemical Agent-Destruction Pilot Plant:** Designed, built, and now systemizing a first-of-its-kind plant to safely destroy the chemical weapons stockpile at the Blue Grass Army Depot.

**44. Vogtle Units 3 & 4:** Completing construction of the two-reactor expansion of a nuclear power plant near Augusta, Georgia, for Georgia Power.

**45. Horizon Wylfa Newydd Nuclear Power Plant:** Providing project management for a new two-reactor nuclear power plant that will provide electricity to 5 million homes in the U.K.

**46. Sellafield Pile Fuel Cladding Silo Retrieval:** Designed, fabricated, and installed silo doors and waste retrieval and handling modules at a nuclear site for the U.K. Nuclear Decommissioning Authority.

**47. United Kingdom Defense Equipment and Support:** Supporting reorganization of the U.K.'s Ministry of Defense procurement and project management, using EPC insights to enhance delivery and establish functional oversight of people, processes, and performance.

**48. Australia Defence Reform:** Executing a reform plan to improve equipment acquisition, sustainment, and management practices of Australia's Department of Defence.

# Our People

Bechtel is 45,000 men and women worldwide who understand that we exist to make our customers successful. We understand that customers do not hire companies. They hire people. Delivering the world's most challenging projects ultimately comes down to the skills, expertise, experience, and ingenuity of individuals working together as a team aligned to a common mission. That's why we will always be a company committed to attracting, retaining, engaging, inspiring, and rewarding the best people in our industry.

## Building a Stronger Bechtel

Investing in our people and creating a workplace that brings out their best are crucial to delivering for our customers. Our three-year workforce strategy is focused on:

- Promoting a competent, committed, diverse, empowered, and engaged workforce that is self-sufficient, valued, challenged, motivated, and treated fairly.
- Aligning all people and processes to deliver the right talent to projects and functions on time with predictability.
- Improving the quality, efficiency, effectiveness, cost, and consistency of Human Resources service delivery.

## Increasing Diversity and Inclusion

Our values at Bechtel include a commitment to “actively build a diverse, inclusive, and collaborative work environment where all views are welcomed, openness is encouraged, and teamwork and merit are cornerstones.” To that end, we embrace diversity in gender, race, nationality, culture, ethnicity, thinking styles, sexual orientation, and all the other attributes that make each of us unique.

Bechtel is implementing a focused D&I strategy and action plan to build a culture that engages and values all colleagues, attracts the best talent from diverse backgrounds, and provides everyone the opportunity to succeed. Our near-term goals include training all senior leaders, supervisors, and hiring managers on new D&I objectives and offerings; ensuring candidates for supervisory roles are interviewed by a panel rather than a single individual to further reduce bias in the hiring process; and publishing the diversity information of Bechtel's top 300 positions and the successors to those positions.

## Building Careers

We aim to be the employer of choice in our industry. We are making improvements to our internal processes to address job eligibility, position posting, our interview processes, and sharing clear criteria for promotions and career advancement. We are also partnering with external stakeholders to create career opportunities. In Saudi Arabia, for example, Bechtel launched a major new graduate recruitment program with the Riyadh College of Technology (RCT), with a focus on contributing to the success of the country's Vision 2030. Through the joint initiative, Bechtel will train and hire RCT students pursuing careers in civil engineering, architecture, and survey technology.



We are implementing a focused Diversity and Inclusion strategy and action plan to build a culture that engages and values all colleagues, attracts the best talent from diverse backgrounds, and provides everyone the opportunity to succeed.



### Driving Performance

We are promoting a feedback-rich culture focused on building self-awareness and closing development gaps. Our goal is to build stronger relationships between supervisors and colleagues by encouraging frequent feedback and discussions on performance. We believe greater employee engagement will build stronger teams that will deliver increased value to our customers and the business.

### Building Leaders

We are investing to build the next generation of leaders needed to deliver extraordinary results for our people and our customers. Our Human Resources team is launching a new enterprise-wide program to strengthen training and support for supervisors as they take on critical leadership roles, with a focus on personal development, helping others succeed, and accountability for results.

Bechtel's Field Leadership Development Program is a comprehensive development and talent management strategy to improve SQPL (Safety, Quality, Productivity, and Leadership) performance. Through skills assessments, onboarding, and construction leadership workshops, coaching, and building up talent pools, Bechtel cultivates high-performance field teams that deliver for our customers.

### Engaging Our Communities

**DiscoverE:** Sustains and grows the engineering profession through volunteering, education, and outreach to students. In 2017, we celebrated the 25th anniversary of DiscoverE's Future City Competition by live-streaming the U.S.-based championship to 16,000 middle school participants, mentors, and teachers in Canada, China, Egypt, and the U.S.

**Engineers Without Borders:** Supports community-driven sustainable design and development programs around the world. In 2017, we partnered with nine communities to design and build projects that will address sanitation, clean water, clean energy, and local infrastructure needs.

**FIRST Robotics:** Inspires future science and technology leaders through mentor-based programs for students. In 2017, we provided volunteers and funding to 84 robotics teams in eight countries. Seventeen Bechtel-mentored teams reached the FIRST World Championships.

**Junior Achievement:** Educates K-12 students about workforce readiness, financial literacy, and entrepreneurship. In 2017, we visited 291 schools in 13 countries to mentor 29,000 students.

## Valuing the Talents of Veterans

Bechtel values the skills and experience service members develop while serving their country. We are actively supporting a construction industry initiative in the U.S. that has a goal to hire more than 100,000 veterans. The company is also a longtime sponsor of Helmets to Hardhats, which supports employment opportunities for U.S. military veterans and reservists, as well as the Network of Champions, a consortium of companies that assists injured veterans and their families with career opportunities.

Retired U.S. Army Captain Darren Amick, who works for the company's Nuclear, Security & Environmental business, received an "Outstanding Contributor of the Year" award from the Society of American Military Engineers. Darren led efforts enabling veterans and reservists to receive credit for the training they received while on active duty when searching for positions in the private sector. This transfer of credit helps veterans to be more competitive as job candidates in the construction industry.

## Promoting Diversity in STEM

We are committed to empowering professionals and students from diverse backgrounds to pursue science, technology, engineering and mathematics (STEM) programs and careers.

Bechtel is a member of the 50K Coalition, which aims to produce 50,000 diverse engineering graduates annually by 2025. Formed by the American Indian Science and Engineering Society, the National Society of Black Engineers (NSBE), the Society of Hispanic Professional Engineers (SHPE), and the Society of Women Engineers, the coalition works to change public perceptions of engineering and encourages women and members of other underrepresented groups to enter the engineering field.

Bechtel is also an active supporter of the National Action Council for Minorities in Education (NACME), co-founded in 1974 by Steve Bechtel, Jr. The company and its foundation have invested more than \$2.5 million in NACME programs since then. In 2017, we announced that we are funding five scholarships through NACME. Two students are receiving Bechtel NACME scholarships. Three students will receive scholarships through the Bechtel Women in Engineering Scholars program, created in 2015 to honor Steve Bechtel, Jr.'s induction into the STEM Leadership Hall of Fame.

Our Oil, Gas & Chemicals business received the Houston 2017 Corporate Partner of the Year award from both the NSBE and the SHPE. In addition, Bechtel's Javier Moya was honored as the SHPE Houston 2017 Ambassador of the Year, for his contributions and leadership with the SHPE Houston STEM/Professional Development Ecosystem.

We are committed to empowering professionals and students from diverse backgrounds to "Dream Big" and pursue STEM programs and careers.



Bechtel is actively supporting a construction industry initiative in the U.S. to hire more than 100,000 veterans.

Left: Retired U.S. Army Captain Darren Amick



The Bechtel Group Foundation contributed \$500,000 to the American Red Cross Hurricane Harvey relief efforts and matched gifts from employees worldwide.



### Recognizing Our Colleagues' Accomplishments

Engineer and project manager Linda Miller received an Order of the British Empire (OBE) for services to engineering and promoting gender equality. The OBE is a British order of chivalry presented by Her Majesty the Queen rewarding contributions to the arts and sciences, work with charitable and welfare organizations, and public service outside the Civil Service.

### Supporting Communities

In response to the unprecedented flooding resulting from Hurricane Harvey along the U.S. Gulf Coast, the Bechtel Group Foundation immediately contributed \$500,000 to the American Red Cross relief efforts and launched a special campaign to match gifts from Bechtel colleagues. Together, the Foundation and Bechtel colleagues from 15 countries on six continents donated nearly \$1 million to assist Gulf Coast families impacted by the Category 4 hurricane. Immediately following the flooding, our colleagues in Houston organized support for affected colleagues and communities, providing safety equipment, collecting basic supplies, and organizing volunteer clean-up crews.



Above: Linda Miller receiving an Order of the British Empire from Britain's Prince Charles.

# Our Work

Since 1898, we have been the trusted partner of industry and governments worldwide, helping them deliver more than 25,000 projects in 160 countries on all seven continents. We serve a range of markets through four global business units: Infrastructure; Nuclear, Security & Environmental; Oil, Gas & Chemicals; and Mining & Metals.

From initial planning and investment through startup and operations, collaboration with our partners is the key to long-term success.

Our customers' projects are an investment in humanity's future. They grow economies, connect and empower communities, improve access to energy and resources, connect citizens to vital services, and make the world a safer and cleaner place. We are proud to be entrusted with responsibility for these critical missions.

Aligning our capabilities with our customers' goals, we can drive innovation across the project lifecycle, mitigate risk, and help ensure a lasting positive legacy.

26° 5' 23" N | 50° 36' 16" E

**Alba Line 6 Expansion Project** Bahrain



## Maintaining U.S. Leadership in Nuclear Technology

Bechtel is leading the construction of a landmark expansion of Vogtle nuclear power plant in Georgia, a pivotal project for our customer, their stakeholders, and for the nuclear industry in the U.S.

Bechtel has completed more than 74,000 megawatts of new nuclear generation capacity, and has performed engineering and/or construction services on more than 80 percent of nuclear plants in the U.S. and 150 facilities worldwide. With the completion of Watts Bar Unit 2 in 2016, and the work underway to complete Vogtle Units 3 & 4, Bechtel is delivering the first two U.S. nuclear power plants of the 21st century.

Plant Vogtle Units 3 & 4 will be the first advanced Gen III+ units built in the U.S. and are currently the only new nuclear units being constructed in the country. At peak construction, the project will employ more than 6,500 people, including 5,000 craft workers.

Nuclear Energy Institute President and CEO Maria Korsnick said, "Completion of the Vogtle reactors will signal that the United States continues to be a significant force in the global nuclear industry." The project is "absolutely critical to help maintain American leadership in nuclear technology," she said.

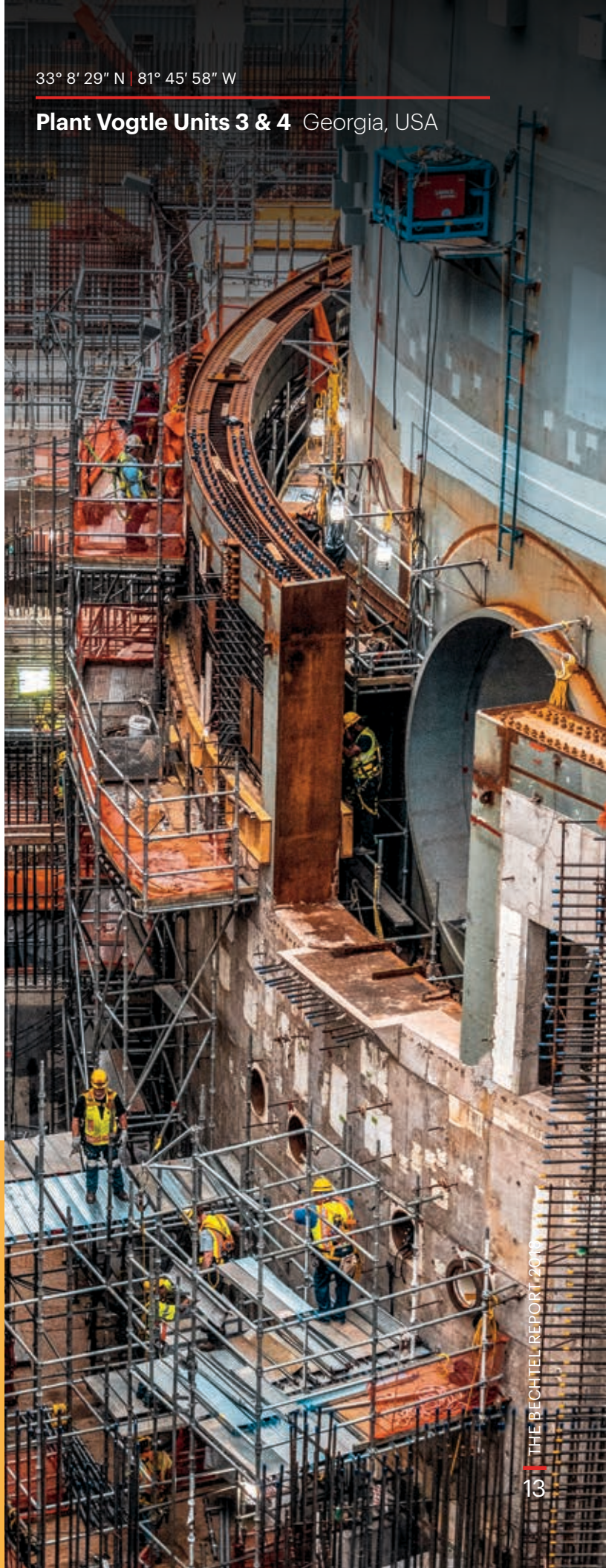
Nuclear power currently makes up one-fifth of the United States' electricity. With the expected retirement of many nuclear power plants in the next five to 10 years, Vogtle Units 3 & 4 are a critical part of the effort to maintain a vital source of clean energy. The two-reactor expansion will make Plant Vogtle the largest generator of carbon-free electricity in the U.S.

"The two new units at Plant Vogtle will be in service for 60 to 80 years and will add another low-cost, carbon-free energy source to our already diverse fuel mix."

– Paul Bowers, CEO, Georgia Power

33° 8' 29" N 81° 45' 58" W

Plant Vogtle Units 3 & 4 Georgia, USA



## Transforming Global Energy Markets

In Corpus Christi, Texas, Bechtel is constructing a third LNG train for Cheniere Energy. In addition to the three production trains, the Corpus Christi liquefaction project (CCL) will include Bechtel-built LNG tanks and loading berths for exporting LNG to global markets. CCL's Train 3 is the eighth train built by Bechtel for Cheniere on the U.S. Gulf Coast, adding to the five trains at the company's Sabine Pass facility.

As one energy expert described it, LNG is "transforming the global energy market and making the United States a global gas superpower." To date, Bechtel has constructed an industry-leading 42 LNG trains in 10 countries, representing more than 30 percent of the world's LNG capacity.

Natural gas is serving as a key resource to support continued economic growth as the world transitions toward a lower-carbon-energy future. LNG is natural gas that's been compressed by refrigeration to minus 258 degrees Fahrenheit (minus 161 degrees Celsius). The liquid occupies 600 times less space than in its gaseous state, making it practical to ship by ocean tanker. Each 900-foot tanker contains enough LNG to heat 45,000 homes for a year.

"In 2017, we, with our engineering, procurement, and construction partner Bechtel, placed Trains 3 and 4 at the Sabine Pass Liquefaction (SPL) project into operation ahead of schedule and on budget. Trains 1 through 4 at the SPL project were all brought online ahead of schedule and on budget in a period of only 17 months, an unprecedented achievement in our industry."

– Jack Fusco, President and CEO, Cheniere Energy

27° 52 59" N | 97° 16 '35" W

**Corpus Christi Liquefaction** Texas, USA





## Toronto-York Spadina Subway Extension Canada



### Delivering Efficient and Sustainable Public Transit

The Toronto Transit Commission (TTC) called on Bechtel to oversee the final years of construction on the Toronto-York Spadina Subway project. Opened in December 2017, the extension is the largest expansion of Toronto's subway system in nearly 40 years.

Bechtel provided program management services as part of an integrated delivery team with the TTC. A global leader in rail, Bechtel has successfully delivered more than 6,200 miles of railways and completed 35 metropolitan rapid transit systems, including major ongoing metro projects in London, Riyadh, and Sydney.

Giving daily commuters new options and helping to spur economic growth in the Greater Toronto Area, the new extension includes six new stations with intermodal connections including GO commuter rail, city bus service, bus rapid transit, and commuter parking.

The extension will eliminate 30 million car trips annually, helping to ease traffic congestion, which was costing the city an estimated \$6 billion a year. The reduced traffic will also contribute to improved air quality and reductions in greenhouse gas emissions.

"This historic investment...will help build an even Greater Toronto Area by making it easier for people to get to work, class or anywhere in between, faster and hassle-free. And it will slash travel times for transit riders and ease road congestion for drivers, letting you get to where you need to go in record time."

– Kathleen Wynne, Former Premier of Ontario

## National Project Management Organization Saudi Arabia



## Establishing World-Class Project Capabilities

Efficiently delivering complex infrastructure projects involving coordination among multiple government agencies will be vital to Saudi Arabia’s Vision 2030, the Kingdom’s ambitious blueprint for the future.

Bechtel is helping the Saudi government create and operate a new National Project Management Organization (NPMO), known in Arabic as Mashroat. According to its formal vision statement, the NPMO is designed to be the enabling engine for national project delivery, operations and maintenance, achieving the highest efficiency, effectiveness, and greatest sustainable impact on socio-economic development.

Bechtel’s role is to establish an operating model, organizational structure, and framework for Mashroat — undertaking a rationalization of programs among all the Saudi ministries by applying engineering excellence, best practice project management tools, reformed contracting and tendering processes, accountability standards, delivery of training, and access to data.

Bechtel experts are training Saudi nationals; developing world-class systems and processes for the NPMO; and sharing these new tools across all Saudi government ministries. This work will help create a dynamic ecosystem to deliver efficient and effective projects with the greatest impact.

We are also working to support the development of the Kingdom’s next generation of engineers. Bechtel launched a graduate recruitment program with RCT to train and subsequently hire 75 RCT students who are pursuing careers in civil engineering, architecture, or survey technology.

“Our ambition is to see our students contributing towards Saudi Arabia’s 2030 vision. Developing their skills and careers at this prestigious company will help them to achieve this success.”

– Dr. Abdulrahman Al-Ghanim, Dean of the Riyadh College of Technology

## Preventing Weapons of Mass Destruction Proliferation

In 2017, Bechtel completed 25 years of project management and integration work for the U.S. Department of Defense Cooperative Threat Reduction (CTR) Program and the Global Partnership for Peace.

After the fall of the Soviet Union in the early 1990s, more than a dozen independent countries emerged in Eastern Europe and Central Asia, bringing with them 35,000 nuclear weapons; 40,000 tons of chemical weapons; and a deadly stockpile of biological weapons.

The CTR Program was created by Congress, with the leadership of Senators Sam Nunn and Richard Lugar, to assist the former Soviet states in transporting, safeguarding, and destroying the weapons. Bechtel designed and built state-of-the-art facilities and infrastructure to support the effort.

For example, Bechtel modernized and safeguarded 43 former biological research, diagnostic, and pathogen storage centers. Work ranged from dismantling the largest Soviet biological weapons production facility to constructing dozens of diagnostic and biosafety laboratories.

Over the years, Bechtel's focus evolved from building modern facilities to overseeing a sustainability-focused knowledge-transfer and training program. U.S. scientists established curricula and trained their local counterparts to help these countries sustain the work and the peacetime research programs.

Today, Bechtel leads teams that are designing, building, and operating state-of-the-art plants to safely eliminate stockpiles of chemical weapons for the U.S. Army in Pueblo, Colorado, and Richmond, Kentucky.

“Bechtel was one of our key early partners. The strong performance by these original contractors on those first projects, demonstrating that the task could be accomplished, was critical to the [CTR] program’s survival and ultimate success.”

– Retired U.S. Senator Richard Lugar

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**U.S. Department of Defense Cooperative Threat Reduction Program**  
Eastern Europe and Central Asia



## Driving Sustainable Greenfield Construction

In Queensland, Australia, Bechtel is overseeing construction on a major expansion of Rio Tinto's bauxite operations through the greenfield development of a new mine at the Amrun site. The mine is a crucial source of raw material for two Rio Tinto alumina refineries.

Among other challenges, the project required construction of a new export facility comprising a 2,132-foot (650-meter) access jetty and 1,148-foot (350-meter) wharf, posing potential safety risks to craft workers operating at height and over water. It also created risks to the environment on the lands of the Wik-Waya people, the Traditional Owners.

The project partners—Rio Tinto, Bechtel, McConnell Dowell Constructors, and Jacobs—devised a design that allowed for a more economical, less invasive way of building large marine structures.

By prefabricating modules for the wharf off-site, the project reduced the risks of constructing over water and at height in a remote location. The solution saved more than 300,000 job hours and reduced the overall build-time by half. It also minimized the impact to marine life by reducing the number of permanent piles required to be installed.

“Innovations such as these are integral for advancing the future of the mining and metals industry in a safe, cost effective, and replicable manner. The collaboration between Rio Tinto, Bechtel, McConnell Dowell, and Jacobs throughout the design, fabrication, and construction phases of the project has delivered an approach to wharf building that will pave the way for future projects, not just in Australia but globally.”

– Marcia Hanrahan, General Manager,  
Rio Tinto Amrun Project

12° 42' 7" S | 142° 4' 1" E

**Amrun Project** Australia



## Al Taweelah Alumina Refinery United Arab Emirates



### 11,000 Colleagues, 44 Nationalities, 24 Languages—Working as One Team

Consisting of two production trains with a nameplate production capacity of 2 million tonnes of alumina per year, the Al Taweelah Alumina project (ATA) is the world's largest greenfield alumina refinery and the first to be built in the United Arab Emirates (UAE). A Bechtel Petrofac Joint Venture (BPJV) is building the refinery for Emirates Global Aluminium (EGA), the biggest industrial company in the UAE outside oil and gas. ATA is expected to meet 40 percent of EGA's alumina requirements, helping EGA meet demand from automakers in Japan and elsewhere in Asia, and supply the increasing number of aluminium-consuming infrastructure projects in the Middle East. This investment is an important part of the UAE's economic diversification and job-creation strategy aimed at transforming the country into a global hub for aluminum production.

The ATA project has progressed through construction and is currently at its pre-commissioning peak. In addition to meeting the challenges posed by the sheer size and complexity of the project, BPJV has successfully integrated a global workforce into one team, with everyone working toward a common goal. This has all been done with one of the best safety records in the industry.

“Safety is the first priority of everyone at EGA, regardless of their position in the organization. This safety record is the result of intense effort throughout the alumina refinery project team.”

– Abdulla Kalban, Managing Director & CEO,  
Emirates Global Aluminium

## West Nile Delta Gas Processing Terminal Egypt



### Increasing Gas Production in Egypt

Bechtel is building BP's West Nile Delta (WND) onshore gas processing terminal at Idku City, near Alexandria, Egypt. When completed, the facility will provide processing capacity for more than 1 billion cubic feet (28,316,847 cubic meters) of gas per day, equal to nearly one quarter of Egypt's current output.

BP selected Bechtel to execute a fast-track engineering, procurement, construction, and commissioning program for a greenfield gas processing facility that will tie into a modified existing one.

Bechtel is a global leader in the integrated design, procurement, construction, and project management, with more than 50 major oil and gas field developments as well as 110 gas processing plants successfully completed.

Egypt has embarked on a plan to become a regional hub for the trade of LNG and to be self-sufficient in gas by the end of 2018. The West Nile Delta project will create an important legacy for the local community, with a peak direct and indirect workforce estimated at more than 5,000 people and a focus on upskilling programs for subcontractors and suppliers.

"This is a critical milestone in Egyptian oil and gas history. It marks the start of a major national project to add significant production to the domestic market. BP expects to double its current gas supply to the Egyptian domestic market during this decade when the WND project reaches its peak production."

– Hesham Mekawi, BP North Africa Regional President

# Partnering with Customers for the Future

Bechtel is committed to deep and enduring partnerships with its customers, helping them realize their most important goals. Chairman & CEO Brendan Bechtel and President & COO Jack Futcher discuss what that means for Bechtel today and what the company is doing to ensure it continues to deliver on this commitment going forward.

## What are customers valuing today as they look to hire a company like Bechtel?

**BRENDAN:** The word that we hear a lot from our customers is collaboration. Customers want all the things that we've always been accountable for — safety, quality, cost, schedule — and they want them delivered in a way that is highly collaborative. They also want to know that we understand and are aligned with their business goals.

At the beginning of every customer engagement, we sit down together and define what good looks like in terms of being a partner. Also, I give every customer a copy of our Vision, Values & Covenants and say, this is our ultimate measure of success. If we're not living up to this, pick up the phone and call me, and we will fix it.

Our customers also increasingly understand that sustainability has real implications for the long-term value of their projects. They are intensely looking at the environmental and social and economic sustainability of the work we're doing. Over the past few years we've integrated sustainability into the way we work and defined specific goals to further sustainability in our industry.

## What does that collaboration look like in practice?

**JACK:** Customers want transparency and involvement, especially when challenges arise. In the past, we were more prone to come up with the solution to a problem ourselves. An important shift that's occurred is, customers want to know about an issue right from the beginning. And they want to be part of the discussion about different options instead of us coming to them with a pre-baked solution.

## How is Bechtel working to differentiate itself today?

**BRENDAN:** If you think about it from a customer standpoint, the critical things are the quality of our teams, price, and schedule.

Our customers have told us for many years that they choose us because of the quality of our people. That's why our leadership team is obsessed with making sure we're doing everything we can to develop the right competencies, behaviors, and culture within our company.

**Brendan Bechtel**  
Chairman & CEO



**Jack Futcher**  
President & COO





In terms of driving performance on cost and schedule, we are investing heavily in innovation. We allocated \$60 million over the past few years to create our Future Fund, which is gathering ideas from our people and using a rigorous methodology to identify the ones with the highest potential to reduce cost and cycle time without compromising quality.

**JACK:** Most of the initiatives that we have focused on involve creating greater value in our EPC self-perform delivery model. That is where we think we can provide the greatest value, giving customers the most certainty at the lowest cost, and deliver the project faster.

In particular, we've focused on two big areas. One is optimizing the engineering on projects so that we can put less concrete, less steel, less pipe, less equipment into a plant, but still have it produce the output that a customer needs. The other area is developing new processes and tools to allow our craft professionals to perform at an even higher level.

In a self-perform model, our craft professionals—the iron workers and the rod busters, the pipefitters and pipe welders, the electricians—they are Bechtel people. The tools we're designing are giving them more ownership and accountability. Our goal is to enable them to own their planning and scheduling and be more accountable for their output rather than having non-craft professionals telling them what to do, when to do it, and how to do it.

## What's an example of how innovation is empowering your craft professionals?

**BRENDAN:** Never in my wildest dreams did I imagine that we would be taking inspiration from ride-sharing apps to reimagine our work. But our people can use it now to call for a crane on a job site just like they would call for a car going to a ball game. When I was coming up in the business not all that long ago, I had to drive around and find the construction equipment superintendent, who

might be busy doing something else. Now, it's just an app on my phone. And then we have a log of the data behind that, feeding into other systems tracking schedule and cost, resulting in empowering our people and enabling them to be more efficient.

## You have a goal to reduce project delivery costs by 20 percent and improve schedule performance by 30 percent by 2020. Are you on target?

**JACK:** We've set a high bar, and there are examples where we've achieved significant improvements. The best examples are in our LNG business. The first trains we started for Cheniere eight years ago took about 48 months. Now, our goal is to deliver in 40 months. There are instances where we have achieved 20 to 25 percent improvements in productivity. But we haven't been able to do it consistently yet. We are continuing to work on it. I believe we will get there.

**BRENDAN:** This is a critical challenge. The construction industry has had the lowest productivity gains of any industry over the last decade. I believe that if the industry doesn't address this, we will be innovated out of the supply chain for our biggest customers. Bechtel is determined to be a leader in this effort, just as we were years ago in raising the industry bar for safety.

## Where do you see additional potential for gains over the next several years?

**JACK:** Becoming a fully digital company. We began this four years ago by creating our digital supply chain, which we're currently rolling out across our fleet of projects. Now we're building on that with an initiative called the Digital Enterprise Program. The Digital Enterprise Program will tie in all of our tools, work processes, and procedures. We're counting on this investment to deliver greater speed and efficiency.





**BRENDAN:** From my perspective, the big advantage is the opportunity this creates to redesign a lot of our job descriptions and eliminate functional silos. So, while the tools and systems are going to be easier to use and provide a better experience for our people and our customers, the real change is going to be the integration of all of these systems.

### **As Bechtel becomes an increasingly digital enterprise, what opportunities are you seeing in the area of data analytics?**

**BRENDAN:** Data science is giving us the power to solve problems that were previously unsolvable, which opens the door for new opportunities to improve operational performance and provide value to customers. With that in mind, we made a strategic decision to develop the capability in-house. Over the last year and a half, we have invested heavily—time, talent, and treasure—in building out what we call BDAC, the Big Data and Analytics Center of Excellence. It's going to provide us better insights, which drive better decisions, which lead to better results for customers.

We're still early in building our capabilities. But what's been most interesting is that it's already changing the types of questions we're asking. It's enabling us to get at the root causes of behaviors and outcomes so that we can identify the knobs we can dial up or down to create more value in project performance.

**JACK:** The decision to build BDAC in-house is like earlier choices we made to do certain work on a self-perform basis. For example, we used to contract out work on the big cryogenic storage tanks on LNG facilities. Seven or eight years ago, we created our own capability. Now, we're one of the leading cryogenic tank EPC companies. And we can deliver a lower cost with more schedule certainty. Another example is making our own pipe. We have a joint

venture in Turkey with a longtime Bechtel partner, and that shop delivers fabricated pipe spools to our projects all over the world.

More recently, we invested in creating our own welding and technology center in Houston. For many years, Bechtel was a leader in welding technology. A lot of the welding techniques used today were pioneered by us 30 and 40 years ago. I'm excited that we are focusing on innovating again in this area because it's so important to quality and productivity.

### **This year is Bechtel's 120th anniversary. What do you hope that tells customers about the company?**

**BRENDAN:** I say we're celebrating our first 120 years, because I fully expect that there will be another. I think we've made it for 120 years because we're productively paranoid. We're obsessed with what we could be doing differently and where we could have done better. And it drives us. We build teams of people who are wired that way, and we nurture that.

People say, how can you be entrepreneurial when you're a 120-year-old company? It's what we do. Every project is like a startup company. We build teams of people, some of whom have worked together, some of whom are new. We go to far-away places to work with customers on challenges that are rarely the same. And we come together and figure it out. And we do that over and over. We've done it 25,000 times, in more than 160 countries, on all seven continents, for 120 years. It's what we do. And we all love to do it.

# Our Future

Bechtel is working to accelerate the discovery and adoption of innovative new solutions that can dramatically improve project design and execution, quality, and safety. Advances in big data, artificial intelligence, wearable sensors, autonomous vehicles, and other technologies are creating opportunities to work safer, better, and faster. Looking to the future, the value we deliver will be increasingly driven by our ability to apply these advances to solve our customers' most critical challenges.

## **Future Fund**

The Future Fund is a \$60 million fund created to stimulate innovation within Bechtel, specifically tasked with seeking out new, disruptive ideas from our colleagues. The Future Fund provides resources to ideas that can dramatically improve safety, quality, engineering, procurement, construction, and commissioning processes. The fund allows ideas to mature from concept to prototype before deploying as project pilots, effectively de-risking exploration and innovation for our projects and customers.

Our colleagues around the world have submitted more than 2,600 ideas, with over 500 ideas in the prototype stage. Of these, 35 have been piloted or implemented on 47 projects, for a total of 147 deployments. As of end of 2017, \$45 million has been committed to prototyping and testing these new ideas. Deployed ideas include wearable devices for employees to improve efficiency, use of drones to increase accuracy and safety, creating automated mooring systems, delivering high-risk training via virtual reality, drill-head collision detection, 4D technology and virtual reality to improve cargo logistics, building information modeling, advanced welding solutions, and autonomous equipment.

## **Leveraging Data Science**

Bechtel was recognized by *CIO*, a leading information technology publication, as a 2017 CIO100 Honoree for its innovative use of big data and advanced analytics to access and harness vast volumes of EPC data across the company's global operations to improve delivery of complex projects. Through BDAC, Bechtel leverages big data platforms and data science techniques to gain valuable insights into the drivers of safe, high-quality, efficient projects, and enable faster, better, and smarter decision-making on Bechtel projects around the globe.

## **Creating a World-Class Welding and Applied Technology Center**

Located in the Houston Energy Corridor, Bechtel's Welding and Applied Technology Center (WATC) is focused on welding innovation and advancing technology in the construction industry. The WATC is one example of the way we are developing qualified, skilled labor to help us execute projects across the globe. Through hands-on virtual training and simulations, WATC provides enhanced welding and entry-level craft training in a safe, controlled environment. Utilizing the WATC, Bechtel is proud to participate in the Military to Project Program, which trains, develops, and engages service members as they transition from active duty

Bechtel's Procurement team designed and deployed a new, holistic, data-centric supply chain system to provide greater efficiency and added value to our projects and customers.



Bechtel's Welding and Applied Technology Center is focused on industry welding innovation and advancing technology in the construction industry.



Bechtel sponsored and mentored 17 high school teams to compete in the 2017 FIRST® Robotics Competition World Championships.

Bechtel was awarded the prestigious 2018 Digital Edge 50 Award for its new Pipeline Integrity Management.



The Bechtel-sponsored IMAX film, "Dream Big: Engineering Our World," continues to reach students around the globe.

to professional craft careers. The facility will also host professional society meetings and training with organizations such as the American Welding Society, American Society for Nondestructive Testing, and university educators. The WATC is our physical innovation research and development environment, enabling accelerated discovery and development of physical construction technology solutions for customers and project teams.

### **Innovative Information Security Program Recognized**

The company also was recognized by CSO, a premier security media brand providing insight into business risk leadership, as a CSO50 honoree for its Information Classification and Security program. The program implements a suite of tools that streamline labelling, managing, and tracking of business information so it can be properly used and protected with minimal impact on productivity. Through this initiative, Bechtel is ensuring that the sensitivity of a document or email is part of the creation process enabling the ability to protect that information with appropriate controls (e.g., limited distribution, encryption, storage controls). This additional capability helps ensure Bechtel, our partners, vendors, and customers that sensitive information is appropriately protected.

### **Digital Supply Chain System**

Over a three-year period, Bechtel's Procurement team designed and deployed a new, holistic digital supply chain system to provide greater efficiency and added value to our projects and customers. The work was completed in the fourth quarter of 2017, and the system will be available for use on projects starting in 2018. The new system will transform the way Bechtel procures goods and services, as well as how we collaborate with our suppliers to create value for our clients. It will enable us to improve sourcing decisions, automate and streamline processes, reduce cycle times, improve productivity, simplify the requisition process, improve collaboration, and increase savings.

Among the features of the new system are data transparency and portability to mobile devices, automated due diligence, and supplier screening. In addition, it offers a range of eProcurement capabilities from electronic requests for quotes to reverse auctions, RFID and bar-code material tracking and tracing, electronic supplier invoice submission and approval, digital catalog purchasing, and touchless purchasing.

### **Using Technology to Enhance Workforce Development**

Bechtel and Industrial Training International (ITI), a global leader in training and technical services for users of load-handling equipment, are collaborating to expand the scope of the most widely used virtual reality (VR) crane simulator on the market. The combination of Bechtel's global expertise in rigging, safety, and crane operation and ITI's extensive VR and craft training experience will expand the training module library of crane types and practice assessments endorsed by the National Commission for Certification of Crane Operators. Using the latest technologies and input from industry experts, the training presents in-depth, real-life scenarios to improve operator readiness and safety on site.

### **Inspiring the Next Generation**

Bechtel has long believed that the future of our industry comes from the next generation of STEM professionals. One way of investing in our industry's future is by partnering with organizations such as FIRST®, DiscoverE, and Junior Achievement. The next generation of STEM professionals is vital to the world's continued progress. Not only do STEM skills serve as the backbone of our business, STEM professionals will be delivering the next 100 years of engineering, technological innovation, and invention.

### **U.K. Science Museum Group Partnership**

Bechtel has joined forces with the Science Museum Group to encourage young people to take up careers in engineering and technology. The partnership will run through 2018, which is the Year of Engineering in the U.K., a government-led campaign to support the engineering profession in inspiring the next generation of engineers.

### **Dream Big**

The Bechtel-sponsored IMAX film, "Dream Big: Engineering Our World," continues to reach students around the globe. Geared toward encouraging children to make a difference through careers in STEM, the film has been booked in 84 IMAX and giant screen theaters in 12 countries. In the first 15 months of its release, 2.1 million people attended screenings and participated in discussions on careers in STEM. The film is now also available for streaming through Netflix.

# 2017 Sustainability Performance

In 2017, we launched a set of four enterprise goals and targets to achieve by 2030. They focus on reducing our environmental footprint and driving sustainability in our supply chain, including preventing forced labor and human trafficking. The 2030 timeframe is not a destination, but rather a driver to develop new ways to be a better Bechtel for our customers, colleagues, and industry.





## Target 1:

Contribute 100 ideas to help achieve the United Nations Sustainable Development Goals.

In 2015, more than 190 countries adopted the United Nations 2030 Agenda for Sustainable Development, consisting of 17 goals that cover a range of social, economic, and environmental issues. In 2017, Bechtel published three case studies in support of our commitment to contribute 100 ideas to help achieve the UN's Sustainable Development Goals (SDGs). These papers covered Bechtel's use of the circular economy approach to reduce waste on projects; working with governments to focus more on creating long-term economic development benefits than on local-content requirements when building large-scale projects; and how text analytics can be used to advance a business case for the SDGs in terms of investment, project opportunity, or risk management.

In Rwanda, a new suspension bridge provides safe access to schools, markets, and health care.



## Target 2:

Improve the resilience of 5 million people to natural hazards through our volunteer initiatives.

Examples of Bechtel's resilience work in 2017 included:

### Philippines

Bechtel's technical volunteers continued their support to Conservation International, an international NGO, to help small coastal communities on Iloilo island build their resilience to manage the impact of typhoons. We worked with them to develop site selection criteria, conduct site assessments, and identify optimal locations to apply an innovative approach that uses both natural capital and civil engineering to mitigate storm surges.

### Rwanda

In recent years, two people were killed and seven were injured while walking on logs to cross the Mukungwa River, near the village of Kukibuye. Bechtel volunteers worked with Arup, a longtime business partner, and the U.S. nonprofit Bridges to Prosperity to design and build a 138-foot (42-meter) suspension bridge across the river. The new span provides safe, year-round access to schools, markets, and health care facilities for the village's 12,000 residents.



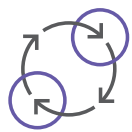
## Target 3:

Use sustainable alternatives to reduce our environmental footprint on 100 percent of our key projects and non-project facilities.

In 2017 we published internal guidance to reduce our energy use, waste generation, and water consumption in our non-project offices and facilities. It collated best practices across the enterprise and normalized our methods and measurements to calculate our sustainability. The guidance helps us promote greater collaboration between facilities, test and share new ideas, and improve cost efficiencies.

Bechtel's Infrastructure business received the U.K. National Standards Body's certification of sustainable business practices, earning the agency's first such qualification granted to an engineering and construction company.

Our internal guidance helps us promote greater collaboration between our facilities, test and share new ideas, and improve our cost efficiencies.



## Target 4:

Engage 100 percent of our key suppliers to promote sustainability in the delivery of materials and services, and prevent forced labor and human trafficking, including within their own supply chains.

Bechtel continues to identify, assess, and mitigate the risk of forced labor and human trafficking in our supply chain. In 2017, we published an internal policy on human trafficking and forced labor. We also developed training on the prevention of these practices in our supply chain and business. In addition, we published our first slavery and human trafficking statement pursuant to the U.K. Modern Slavery Act.

Other steps included completing a methodology that would be paired with machine learning tools to generate data and insights on our global suppliers in order to identify potential suppliers that may be at risk for forced labor issues. Additionally, as a co-founding member of Building Responsibly, an industry initiative to promote worker welfare in our sector, we collaborated with our peers to start developing voluntary principles that aim to build greater awareness and consistency in performance standards.

As a co-founding member of Building Responsibly we collaborated with our peers to start developing a set of principles aimed to build greater awareness and consistency in performance standards.



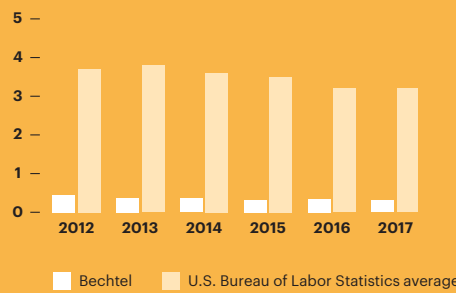


## Keeping People Safe

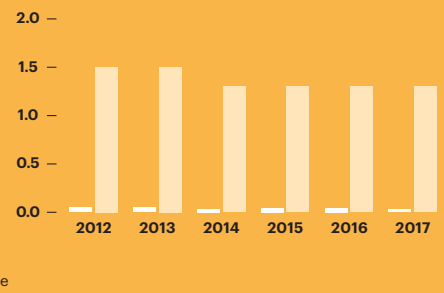
We lowered our recordable incident rate by 11 percent and our lost-time incident rate by 33 percent from 2016.

We remain steadfastly committed to reach zero incidents. In 2017, we made further strides in five focus areas: mobile equipment personnel interface, lockout and tagout, crane safety, fall protection, and dropped objects. The Construction Industry Institute ranks our safety and health program among the best, and our recordable incident rate is 90 percent better than the average for our peers.

## Total Recordable Incident Rate



## Lost-Time Incident Rate

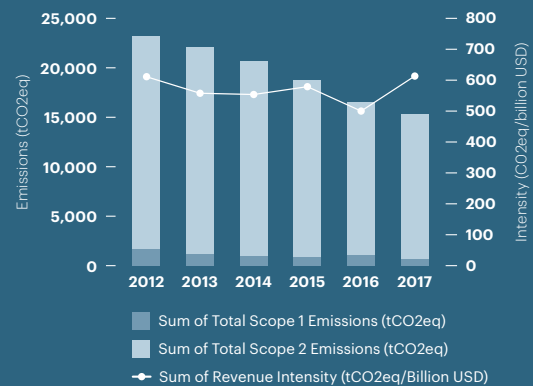


## Reducing Greenhouse Gas (GHG) Emissions

Since 2012 we have reduced our GHG emissions by 31 percent. GHG emissions per billion dollars in revenue went up by 0.3 percent.

At our offices, we continued to focus on reducing direct emissions from boilers and furnaces (scope 1) and indirect emissions from electricity (scope 2). The 15 non-project reporting offices were selected based on average office population for the year. Accounting is based on the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard.

## Greenhouse Gas Emissions



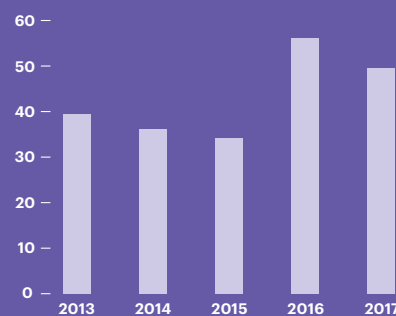
## Reducing Water Consumption

We reduced water use at key permanent offices by 12 percent compared with 2016.

Our total water use for the year was 49.6 million gallons. Since 2013, we have collected water consumption data from offices that can track it. We added data for three new facilities starting in 2016. In 2017, as in 2016, the number of reporting offices was 12.

## Total Water Use at Key Permanent Offices

Million Gallons of Water



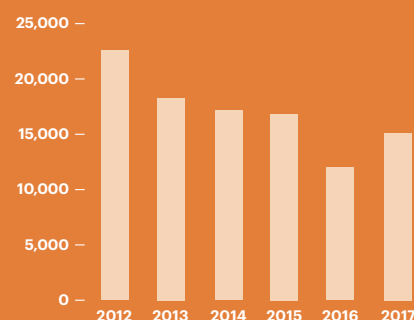
## Generating Economic Opportunities

We increased our global spending on goods and services by 26 percent in 2017 compared with 2016.

In 2017, we spent \$15.1 billion on goods and services globally, including purchases from local, small, and disadvantaged businesses.

## Procurement and Contract Awards 2011-2017

Annual Spend (USD) Millions



# Leadership

(October 1, 2018)

Brendan Bechtel  
*Chairman & CEO*

Jack Futcher  
*President & COO*

Catherine Hunt Ryan  
*Chief Financial Officer*

Mary McLaughlin  
*EPC Functions*

Michael Bailey  
*General Counsel*

Justin Zaccaria  
*Chief Human Resources Officer*

## Infrastructure

Craig Albert  
*President*

*Americas & Power*  
Scott Osborne

*Asia Pacific*  
Mike Wilkinson

*Europe, Africa, Middle East*  
Shaun Kenny

*United Kingdom*  
Paul Gibbs

*Aviation*  
Jim Haynes

*Civil*  
Shawn MacCormack

*Communications*  
Kelley Brown

*Power*  
Scott Austin

*Rail*  
Ailie MacAdam

## Mining & Metals

Paige Wilson  
*President*

*Bulks & Aluminum*  
Phil Newsome

*Copper*  
Bill Swanson

*Strategy & Business Development*  
Lucy Martin

## Nuclear, Security & Environmental

Barbara Rusinko  
*President*

*Defense & Security*  
Michael Costas

*Environmental*  
James Taylor

*Nuclear Security & Operations, Nuclear Power*  
Peggy McCullough

## Oil, Gas & Chemicals

Alasdair Cathcart  
*President*

*Downstream & Chemicals*  
Joe Thompson

*LNG*  
Darren Mort

*Pipeline*  
Rich Wall

*Tanks*  
Chris Desjardins

*Water*  
Joe St. Julian

## Regions & Corporate Relations

David Welch  
*President*

*Africa*  
Andrew Patterson

*Asia Pacific*  
Mike Wilkinson

*Europe & Middle East*  
Stuart Jones

*Latin America*  
Carlos Alarco

*Corporate Affairs*  
Charlene Wheelless

*Government Affairs Washington, DC Office*  
Jay Farrar

*Security*  
Garry Robison

## Other Management

*Bechtel Enterprises*  
Keith Hennessey

*Construction & Bechtel Equipment Operations*  
Doug Omichinski

*Digital Enterprise Program*  
Ross Hamilton

*Engineering & Technology*  
Greg Ashley

*Environmental, Safety & Health*  
Brent Landry

*Ethics & Compliance*  
Nancy Higgins

*Information Systems & Technology*  
Carol Zierhoffer

*Innovation*  
David Wilson

*Internal Audit*  
Steve Kuxhausen

*Procurement & Contracts*  
Alva Hankins, Sr.

*Project Controls*  
Scott Edmunds

*Quality*  
Craig Stoker

*Risk Management*  
Cliff Rankin

*Startup*  
Joe Diaz

## Board of Directors, Bechtel Group, Inc.

### Executive Directors

Craig Albert  
Michael Bailey  
Brendan Bechtel  
Alasdair Cathcart  
Peter Dawson  
Jack Futcher  
Mary McLaughlin  
Barbara Rusinko

### Non-Executive Directors

Riley Bechtel  
*Former Chairman of the Board and CEO, Bechtel Group, Inc.*

Steve Bechtel Jr.  
*Senior Director, Bechtel Group, Inc.*

Leigh Clifford, AO  
*Chairman, Qantas Airways Limited, and former CEO, Rio Tinto Group*

Alan Dachs  
*President & CEO, Fremont Group*

David O'Reilly  
*Former Chairman and CEO, Chevron*

Nick Moore  
*Former Global Chairperson, PricewaterhouseCoopers*

Dan Warmenhoven  
*Former Executive Chairman, NetApp*

# Bechtel Fellows and Technical Excellence

The Bechtel Fellows Program recognizes Bechtel's most senior professional technical specialists who have made significant and lasting contributions to Bechtel's success through innovation and application of advanced technologies, and who have earned a notable reputation at the highest levels of their profession.

The Fellows are a unique, evergreen, world-class "faculty," serving our customers, our company, and the industry in multiple capacities, including:

- Participating in the early development of projects, where their expertise is leveraged to create innovative and cost-effective solutions for customers.
- Assisting customers in obtaining permits and licenses and representing customers in regulatory proceedings, where the Fellows' credibility and industry recognition are valuable assets in obtaining regulatory approvals.
- Helping resolve complex technical issues, ensuring that our projects stay on track and meet all performance requirements.
- Serving in leadership roles in national and international professional societies, academic advisory panels, and industry standards and codes committees.
- Advising senior management on cutting-edge strategic technical issues and future business opportunities.
- Mentoring technical specialists within the company.
- Acting as company ambassadors, representing Bechtel's work at major technical conferences, publishing in well-recognized technical journals, and sharing our experience with the industry.

The Fellows' areas of expertise reflect the breadth of Bechtel's work.

Prem Attanyake  
*Environmental Engineering*

Robert Baxter  
*Air Emissions Control*

Siv Bhamra  
*Rail Systems*

Richard Campbell  
*Metallurgical and Welding Engineering*

José Clemente  
*Geotechnical Engineering*

Richard Colwell  
*Materials Engineering Technology*

Angelos Findikakis  
*Flow and Transport Simulation*

Ben Fultz  
*Corrosion and Coatings*

John Gulen  
*Gas Turbine Technology*

Robert Janssen  
*Hydraulics and Transport Systems*

Sanj Malushte  
*Structural and Earthquake Engineering*

David G. Meadows  
*Geometallurgy & Mineral Processing*

Cyrus Meher-Homji  
*Turbomachinery*

Dave Messersmith  
*LNG Technology*

Javeed Munshi  
*Concrete Structures*

Kit Ng  
*Hydraulic Engineering*

Farhang Ostadan  
*Soils & Earthquake Engineering*

Leonard (Joel) Peltier  
*Computational Fluid Dynamics*

Freeman Self  
*Process Safety / Relief System Design*

Stew Taylor  
*Geotechnology and Hydraulics*

## Bechtel Fellows by the Numbers:

- 751 technical papers authored
- 370+ Bechtel patents issued or pending
- 44 industry and professional society awards, and professional society recognition
- 93 codes, standards and technical committees served on — 16 in leadership roles
- 160 technical presentations or keynote speeches at industry and professional conferences, technical forums, panels or advisory boards, and other venues



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Bechtel is one of the most respected global engineering, construction, and project management companies. Together with our customers, we deliver projects that foster long-term progress and economic growth. Since 1898, we've completed more than 25,000 extraordinary projects across 160 countries on all seven continents. We operate through four global businesses: Infrastructure; Nuclear, Security & Environmental; Oil, Gas & Chemicals; and Mining & Metals. Our company and our culture are built on more than a century of leadership and a relentless adherence to our values, the core of which are safety, quality, ethics, and integrity. These values are what we believe, what we expect, what we deliver, and what we live.

