

# 2016 CORPORATE RESPONSIBILITY REPORT

# TITITI CONSOLENERGY

# LETTER FROM THE CEO

At CONSOL Energy, our goal is to be a unique exploration and production (E&P) company focused on differentiated metrics and employing a nontraditional approach to creating long-term value for our stakeholders. This mindset and culture are built upon the foundational principle of allocating all of the resources at our disposal both efficiently and responsibly.

Likewise, we believe our commitment and approach to corporate responsibility is also a differentiator and a proxy for reducing risk across our business. Managing our risk profile and creating value are benefits of our commitment to corporate responsibility, but that obligation also breathes life into our core values of safety, compliance, and continuous improvement. In short, not only does our commitment to responsible business practices create long-term value for our employees, our shareholders, and the communities where we live and work but most importantly, it is the right thing to do and part of who we are at CONSOL Energy.

During 2016, we continued to execute and deliver on the company's strategic goals. We monetized legacy coal assets as we continued our transformation into a pure play E&P company; we dissolved our Marcellus Shale joint venture which solidified our footprint and opportunity set within the fairway of the Marcellus and Utica shale plays; and we strengthened our balance sheet providing important flexibility in the months and years ahead.

# I AM PLEASED TO PRESENT CONSOL ENERGY'S 2016 CORPORATE RESPONSIBILITY REPORT.

This report also highlights key accomplishments in terms of our commitment to our core values and responsible business practices including:

- CONSOL Energy employees completing 2016 with zero safety exceptions;
- The formation of a multidisciplinary environmental task force;
- Implementation of supplemental emissions control technologies that contributed to a 60% reduction in criteria emissions;
- Improving our best-in-class corporate governance practices by adopting incentive compensation plans that align management and shareholder interests in both weak and strong markets, which resulted in the highest possible ISS Governance QualityScore;
- Over 87% of our service providers' employees live and work in the CONSOL Energy operational areas of Ohio, Pennsylvania, and West Virginia, extending our local roots within the region.

Our efforts to enhance our operations, enrich our communities, and drive value for all of our stakeholders are a continuous focus across CONSOL Energy. We strive to make progress each and every day. I encourage you to learn more by reading our 2016 Corporate Responsibility Report.



Nick Deluliis President and Chief Executive Officer

# ABOUT THE REPORT: ORGANIZATION & OPERATIONAL BOUNDARIES

Headquartered in Canonsburg, Pennsylvania, CONSOL Energy is one of the largest independent natural gas exploration, development, and production companies with operations exclusively in the major shale formations of the Eastern United States. Since our founding in 1860, CONSOL Energy has been a pioneer in providing affordable, abundant, and reliable domestic energy. This is the 6th annual Corporate Responsibility Report for CONSOL Energy. All information contained in this report is from calendar year 2016, unless otherwise noted. During the year, we completed key divestitures in support of our strategic goals. Data related to divested operations have been excluded from this report. Where appropriate, we have included historical performance information and, going forward, we will compare our performance year-to-year.

Our objective is to help all of our stakeholders—shareholders, employees, neighbors in our communities, regulators, and customers—better understand our corporate responsibility objectives, goals, and achievements. Throughout this report, unless otherwise noted, "CONSOL Energy" or the "Company" refers to the following operational areas.

### **E&P OPERATIONS:**

Extracts natural gas from shale, shallow oil and gas, and coal bed methane wells, along with transportation and processing operations. Our E&P activities include a joint venture with Hess Corporation to explore and develop the Utica Shale in Ohio, with CONSOL Energy's share at 50%. This includes management of land-related matters for our E&P Operations including land acquisitions for subsurface oil & gas rights as well as for operational surface rights.

### CONE MIDSTREAM PARTNERS LP:

(NYSE: CNNX) Owns, operates, and develops natural gas gathering in the Marcellus Shale in Pennsylvania and West Virginia through a master limited partnership formed by CONSOL Energy and Noble Energy.

### **DIVERSIFIED BUSINESS UNITS:**

These units comprise strategic noncore assets including real estate holdings operated by CNX Land LLC, water sourcing and delivery company CONVEY Water Systems LLC, our coal export terminal CNX Marine Terminal Inc., and oversight of our legacy coal reclamation and mine water treatment facilities.

A separate report has been prepared with sustainability performance data related to CNX Coal Resources LP (NYSE: CNXC). CNXC is a growth-oriented master limited partnership which is focused on managing and growing its thermal coal operations. CNXC owns 25% undivided interest in and operational control over CONSOL Energy's Pennsylvania mining complex. The report is available at <u>www.cnxlp.com</u>.

### **PROCESS FOR DEFINING REPORT CONTENT:**

This report has been prepared in accordance with the GRI G4 Sustainability Reporting Guidelines. Topics covered in this report are those that we believe are most pertinent to our business. In choosing the content of this report, we considered CONSOL Energy's short-term and long-term strategies as well as the following criteria:

- Concerns and topical issues brought to our attention through stakeholder dialogue;
- Topics included in surveys sent to us by sustainability indexes and rating agencies for the assessment of our sustainability performance;
- Public information gathered from institutions, governments, nongovernment organizations (NGOs) and associations, at both national and local levels; and
- Benchmark analysis and monitoring of the oil and gas sector.

The following is a list of the GRI Aspects that CONSOL Energy feels are most material to our Company:

ECONOMIC	ENVIRONMENTAL	LABOR PRACTICES & DECENT WORK
Economic Performance	Compliance	Occupational Health and Safety
Reserves	Emissions	Training and Education
	Water	

In addition to the above listed material aspects, we have included other GRI aspects and related information in this report where appropriate.

This report was prepared by CONSOL Energy representatives, and it has been reviewed and approved by CONSOL Energy's Health, Safety, and Environmental Committee of the Board of Directors. External assurance on any portion of this report was not conducted this year.

CONSOL Energy's Internal Audit (IA) Department reviewed the 2016 Safety and Environmental Statistics reported in the Corporate Responsibility Report. For Safety, IA reviewed the Employee Total Recordable Incident Rate and the Contractor Total Recordable Incident Rate. For Environmental Management, IA reviewed the Notices of Violation, Spill Quantities, and Penalty Payments. No material variances were noted.

# **ABOUT CONSOL ENERGY**

CONSOL Energy's transformational journey continued and gained significant momentum in 2016. What has emerged from this period of intense change is a new mindset and culture, infused with a renewed sense of urgency and a startup mentality built upon the foundational goal of optimizing the allocation of all capital resources to enhance the long-term value of the Company.

There are three pillars that underpin this new culture and serve to differentiate CONSOL Energy from its peers—values, philosophy and assets. These pillars are directly aligned with the interests of the Company's most important constituencies its owners and employees.

### VALUES

While much has changed in recent years, CONSOL Energy's commitment to its core values—safety, compliance, and continuous improvement—remains steadfast. The Company's goal is to have the best safety and environmental record in the industry. This commitment to responsible business practices helps lower costs and reduces operational risks thereby protecting employees, communities where the Company operates, and its corporate reputation. In an industry that is subject to intense public scrutiny, CONSOL Energy's values support its social license to operate and mitigate its business risk profile.

### PHILOSOPHY

CONSOL Energy is data-driven in its decision-making and committed to the process of zero-based budgeting. The Company's philosophy and culture provide flexibility and optionality to ensure the prudent allocation of resources.

### ASSETS

Enhanced by the dissolution of the Marcellus Shale joint venture in 2016, CONSOL Energy has a substantial inventory and the largest stacked pay opportunity set in the Appalachian basin. These stacked pay opportunities are unique across the core Marcellus and Utica plays. With a top tier asset base as the foundation, the Company's operational evolution continues. Improvements in drilling, completions, production, and cycle times have been propelled by efficiency gains that resulted in lower cost, improved well profiles, and increased rates of return.

CONSOL Energy's total 2016 natural gas production was 394 Bcfe. Given the fluctuations in commodity prices, CONSOL Energy managed its assets and operational activities accordingly as demonstrated in the chart below.

(000 OMITTED, EXCEPT PER-SHARE DATA)	2016
Operating Revenues from Continuing Operations	\$2,026,375
Net Income Attributable to CONSOL Energy INC. Shareholders	(\$848,102)
Earnings per Share (diluted)	(\$3.70)
Operating Cash Flow	\$469,285
Capital Expenditures	(\$226,820)
Gas Production (Bcfe)	394.4
Coal Production (tons in millions)	24.7

Through both strong and weak markets, CONSOL Energy remains committed to its core values and business philosophy. This commitment ultimately increases efficiencies, lowers aggregate risk, reduces cost and supports the overarching goal of enhancing long term value for the Company's stakeholders.

### NATURAL GAS OUTLOOK

The U.S. Energy Information Administration (EIA) estimates that natural gas prices will average \$3.55 per MMBtu in 2017 and \$3.73 per MMBtu in 2018, a significant departure from the \$2.51 per MMBtu average in 2016. Additional pipeline capacity, the introduction of new downstream petrochemical markets, and increasing export opportunities promise to continue to drive demand for natural gas. By implementing a robust programmatic hedge initiative, CONSOL Energy is well positioned to capitalize on future market opportunities. This hedge program is strengthening the Company's liquidity position and balance sheet, limiting exposure to lower in-basin prices and, ultimately, de-risking CONSOL Energy's portfolio.

### **LOOKING FORWARD IN 2017**

CONSOL Energy will continue to focus on its goal of driving long-term value through the sound allocation of all of its resources. The Company intends to prudently grow E&P production by efficiently allocating capital to the highest rate of return projects, focusing on driving down its leverage ratio, monetizing non-core assets and, as a result of these efforts, achieving the full separation of its exploration and production and coal businesses in 2017. Regardless of circumstance, CONSOL Energy will continue its commitment to corporate responsibility to the benefit of all of its stakeholders.



# **CORPORATE GOVERNANCE**

CONSOL Energy's Board of Directors and management team firmly believe that sound principles of corporate governance are essential in making good decisions on behalf of our shareholders, employees, and other stakeholders. We believe that corporate governance goes hand in hand with strong financial performance.

Our Board of Directors regularly reviews our governance policies to ensure that we are in compliance with applicable laws and regulations, as well as best practices. In accordance with these policies, in 2016, three new directors were nominated and elected to the Board of Directors at our Annual Meeting of Shareholders. In addition, we adopted an executive compensation program that further aligns corporate and shareholder interests by focusing on stock price performance, natural gas and coal production, expense reduction, and safety and environmental goals while preserving and increasing cash flow.

### Read our Corporate Governance Policies and Principles.

Please also see our Annual Report on <u>Form 10-K</u> for the fiscal year ended December 31, 2016, and <u>Proxy Statement</u> for the 2017 Annual Meeting for further information.

### COMPLIANCE PROGRAM, CODES OF CONDUCT, AND AVOIDING CONFLICTS OF INTEREST

During 2015, CONSOL Energy established a formal Compliance Program which codifies our core values and certain policies and procedures related to compliance measures. During 2016, the Compliance Program was updated to incorporate industry best practices with respect to the receipt and provision of gifts and entertainment, along with a statement of methodology when CONSOL Energy uses non-GAAP financial measures. The Compliance Program also sets a "Tone at the Top," evidencing that compliance measures and core values start with the Board of Directors and the executive management team. This is necessary to establish a strong cultural expectation of compliance that flows throughout the entirety of CONSOL Energy's organizational structure.

Foundational components of the Compliance Program are the Code of Employee Business Conduct and Code of Director Business Conduct. The essence of our codes of conduct are that CONSOL Energy's directors and employees will conduct our business with integrity, in compliance with applicable laws, and in a manner that excludes considerations of personal advantage. Each of our codes of conduct addresses topics relating to encouraging ethical behavior. This includes: avoiding conflicts of interest, placing restrictions upon the receipt of gifts and the making of payments, protecting CONSOL Energy's assets, and complying with laws. Each year the Board assesses the adequacy of our codes and approves additions or revisions as necessary to keep our codes current with applicable laws. For more information related to CONSOL Energy's codes of conduct, please visit <u>CONSOL Energy's website</u>.

### **BOARD OF DIRECTORS**

CONSOL Energy is governed by a Board of Directors of 11 members, all of whom are independent under New York Stock Exchange rules other than Mr. Deluliis, our Chief Executive Officer and President. CONSOL Energy identified and nominated J. Palmer Clarkson as an independent nominee to its Board of Directors for election at its Annual Meeting of Shareholders scheduled for May 9, 2017. The other nominees include 10 current members of the Board.

We continue to balance the Boardroom by introducing Board members with new perspectives, including Mr. Clarkson. Since 2012, we have added eight new directors to our Board. The Board seeks to maintain effective, well-rounded and financially literate directors.

Mr. William N. Thorndike Jr. currently serves as our non-employee Chairman of the Board. He and Mr. Deluliis, our current President and Chief Executive Officer, provide the Board and the Corporation with the skills, leadership, and direction that CONSOL Energy needs as it continues to execute on its strategic business plan. Mr. Thorndike assumed the position of Chairman at the conclusion of the Annual Meeting held on May 11, 2016.

The combined depth of experiences of Messrs. Thorndike and Deluliis at the helms of our Board and the Corporation promoted decisive, thoughtful and well-reasoned leadership during a time when CONSOL Energy has continued the separation of its coal and E&P business, including the recent dissolution of the Marcellus Shale joint venture with Noble Energy, Inc. in October 2016, and the disposition of additional interest in pipeline and compression systems to CONE Midstream Partners LP for \$70 million in cash and 2.6 million limited partnership units in November 2016. By selecting an independent director as the next Chairman of the Board at the conclusion of the 2016 Annual Meeting, our Board's leadership structure, consistent with the significant changes occurring at the Corporation, has moved the Board into its next phase. This structure continues to ensure clear accountability and enhances the Corporation's ability to communicate a clear, consistent message and strategy to shareholders, employees, customers, and suppliers.

If you would like to learn more about our Board of Directors, Board Committees, and their oversight of economic, environmental, and social performance, as well as the Board's role in risk management, visit <u>CONSOL Energy's website</u>.

### COMMUNICATIONS WITH THE BOARD OF DIRECTORS

To communicate critical concerns to the Board, including those relating to economic, environmental, and social topics, interested persons may do so by writing to the Board, to the attention of the Corporate Secretary at CONSOL Energy Inc., 1000 CONSOL Energy Drive, Canonsburg, PA 15317, or by sending an e-mail to directors@consolenergy.com. The Corporate Secretary will relay all such communications to the Board in its entirety or to individual directors (as appropriate) at the next regularly scheduled Board meeting (or earlier if necessary) except for spam, junk mail, mass mailings, solicitations, resumes, job inquiries, or other matters unrelated to CONSOL Energy. Communications that are intended specifically for the Chairman or the independent directors are to be sent to the street address or e-mail address noted above, to the attention of the Chairman or the independent directors, as intended. Information concerning how to communicate with the Board is also included on CONSOL Energy's website.

# **CORE VALUES**

CONSOL Energy's core values of safety, compliance, and continuous improvement are the foundation of the Company's identity and the basis for how we manage and conduct our business activities. These three values, coupled with two strategic priorities of production and cost, demonstrate our commitment to best-in-class performance that directly translates to strong operations and positive financial results.

### SAFETY

At CONSOL Energy, Safety is at the core of everything we do because it concerns our most important asset: our people. In 2007, our management team implemented the Absolute ZERO program with the goal of developing a zero-based safety culture regarding accidents in the workplace. Our expectation is that any accident is abnormal under the guise of normal operations and is an exception to our values.



### COMPLIANCE

Compliance is our second core value and applies to not only safety and environmental compliance, but compliance with all laws, regulations, permits, Company policies, processes, procedures, and agreements. It is relevant across the entire spectrum of our enterprise and all CONSOL Energy employees, contractors, and visitors are expected and empowered to stop the normal course of operations if he or she believes compliance is being compromised.

### **CONTINUOUS IMPROVEMENT**

Continuous improvement is another core value that is relevant across the entire spectrum of our enterprise. We are continuously looking for ways to improve the manner in which we do business in both our operations and support functions. We are committed to improving the skills and knowledge of our employees. As part of that effort, CONSOL Energy establishes both Company and individual goals on an annual basis that incorporate the concept of continuous improvement.



# HEALTH, SAFETY, & ENVIRONMENTAL

- 100% OF EMPLOYEES RECEIVED SAFETY TRAINING IN 2016
- 100% OF EMPLOYEES WORKED AT ZERO IN 2016
- CONSOL ENERGY EMPLOYS 23 HSE PROFESSIONALS IN SUPPORT OF OUR SAFETY AND COMPLIANCE VALUES
- CONSOL ENERGY INVESTED MORE THAN \$53 MILLION IN CAPITAL AND EXPENSE FOR HSE COMPLIANCE AND EXPENDITURES

Our core values—safety, compliance, and continuous improvement-are the foundation of CONSOL Energy's identity and the basis for how we manage our business. CONSOL Energy has a corporate Health, Safety, and Environment (HSE) department that supports our operations personnel in achieving the safe, compliant, and environmentally responsible development of natural gas. CONSOL Energy has established Company-wide performance metrics and utilizes a series of Key Performance Indicators (KPIs) to track our attainment of these metrics. These HSE performance metrics are a component of incentive compensation plans for all employees, including senior management. We have established best management guidelines and methodologies that support our Company performance objectives and achievement of our HSE KPIs. Our Board's HSE Committee oversees our performance with respect to our core values, and assesses performance against these metrics at every meeting. We detail the 2016 HSE performance of our business units, namely E&P, CONE, and DBU segments, in the respective sections later in this report.

CONSOL Energy has established a formal compliance program that codifies these Core Values through development of consistent policies and management techniques. Assessing and managing HSE and social risk is performed pursuant to the internationally accepted methodologies incorporated into ISO procedures. These risks are currently identified and managed through two systems: CONSOL Energy's Occupational Health and Safety Management System (COSH) and the Company's Environmental Management System (EMS).

### COSH

COSH was born in support of the Absolute ZERO program. The COSH System is based upon the Occupational Health & Safety Assessment Series 18001 (OHSAS-18001). OHSAS is an International Safety Management System that provides the framework for organizations to develop and implement a health and safety program that can be certified and audited.

The benefits of a well-designed occupational safety and health management system go beyond improving individual workplace safety. COSH demonstrates CONSOL Energy's commitment to the safety and health of employees, service partners, and visitors. The COSH System has been adopted by all CONSOL Energy business units and is employed in our workplace on a daily basis. Our COSH manual consists of specific elements related to risk assessments, management of change, accident cause elimination investigations, and safety audits. We employ a systematic approach to eliminate incidents and reduce worker compensation costs while contributing to higher productivity and improved efficiencies.

### INDUSTRIAL HEALTH

COSH includes an Industrial Health Component that is based upon monitoring and control of employee exposure. We work closely with our in-house occupational and industrial health professionals to identify risks and prioritize the need for field evaluation. Subsequently, best practices, protective measures, and Company policies related to employee protection and risk mitigation are developed as needed. In 2016, our industrial health program focused on specific operational phases with the greatest exposure potential to silica, noise, and bloodborne pathogens. We instituted a Silica Monitoring program to protect all employees whose job classifications indicate the potential for exposure to crystalline silica, the major compound used in hydraulic fracturing operations, from the potential adverse effects of crystalline silica exposure. The monitoring program included environmental sampling of potential workplace exposures to our employees and a new medical monitoring program for employees who have the potential to be at or above standardized exposure thresholds.

We also revised our Hearing Conservation Program to ensure all operational employees are protected from the harmful effects of noise exposure in the workplace. Area noise sampling and individual dosimetry testing was completed at our natural gas compressor stations and production sites. Any employee who exceeded the exposure limit was entered into the hearing conservation program where they receive training on proper PPE use and the effects of noise on hearing.

Finally, we reviewed and updated our Bloodborne Pathogens Exposure Control Plan to eliminate or minimize employee occupational exposure to potentially infectious materials. Employees whose job classifications indicate potential exposure have been trained in proper work practices, universal precautions, and personal protective equipment.

### EMERGENCY RESPONSE

There is no sponsor more important in the preparation and execution stages of community awareness than our emergency responders. CONSOL Energy has continued to involve local emergency response personnel in our operations to promote awareness and improve our emergency response management systems. Emergency responders are better equipped to protect their communities and minimize the impact of an incident when they are more familiar with our operations and response protocols. Communication plays a critical role in preserving a strong relationship with our emergency response community. To better support this affiliation, members of the HSE team facilitate responder well site awareness and pipeline safety presentations. The team also conducts field tours to familiarize emergency responders with active location materials, tools, and equipment layout. Emergency responders also participate in annual emergency preparedness exercises. The purpose of these drills is to evaluate emergency plans, identify resource requirements, increase coordination, and improve the overall performance of personnel involved in the response.

### SAFETY ON THE ROADS

CONSOL Energy strives to be a good neighbor within the communities in which we operate by focusing efforts on minimizing and mitigating traffic disruptions within our operating areas. We place signs along approved routes to alert contractors which routes are the safest for them as well as for our neighbors in the community. In addition to minimizing traffic disruptions, CONSOL Energy also repairs and upgrades roads in our operating areas in order to accommodate heavy truck traffic volumes. In 2016, we spent more than \$1 million to repair, repave, and upgrade public and private roads that were impacted by our operations.

It is a policy to institute blackout periods during school bus transportation hours to mitigate safety concerns. To accomplish this, we work with the state and local governments, school districts, and emergency management agencies to provide updates and receive feedback on our planned activities. During rig moves, for example, appropriate advance warning signs supplemented with certified flaggers are utilized to safely control traffic and prevent queuing of traffic at entrances to site locations. Our management recognizes the risk of operating motor vehicles. All employees driving a Company vehicle are required to complete a Driver's Awareness course every two years.

### **2017 SAFETY PLEDGE**

The 2017 Awareness Pledge for all employees and Service Partners is "Take Two." The Awareness Pledge focuses on hazard identification, safe mitigation, and encourages all employees to demonstrate the safe way to do a task. This Awareness Pledge will help reinforce COSH by utilizing Risk Assessments and Management of Change (MOC).

### **ENVIRONMENTAL MANAGEMENT SYSTEM**

Compliance with environmental laws and regulations is not only expected but is a condition of employment at CONSOL Energy. We practice the responsible use of land, water, and air in our operational footprint, and this is reflected in our environmental policy. We recognize that our environmental responsibilities go beyond those required under statutory obligations, so we manage our operations to meet the expectations of our employees, regulators, shareholders, and the communities in which we operate.

Our Environmental Management System (EMS) was designed to provide a framework for business aspects and continuous improvement related to environmental compliance, based upon the International Organization for Standardization (ISO) 14001 management system. The scope of the EMS applies to the entire Company, in which all CONSOL Energy employees have roles and responsibilities in its implementation. Environmental contractors with significant environmental job functions are also integrated within the system. The EMS addresses and manages the impact of activities and processes on the environment, drives continual improvement in managing environmental impacts, and seeks opportunities to improve the integration of business functions with environmental performance. Following a systematic approach of effective planning, review, and corrective action, each of CONSOL Energy's operations assesses priorities and sets environmental goals related to minimizing our impact on an annual basis.

### CONSOL ENERGY'S ENVIRONMENTAL POLICY

The safety and health of our employees and contractors and full compliance with the laws and regulations that govern our businesses are CONSOL Energy's top two core values. Therefore, we strive to conduct our operations to avoid adverse impacts to human health and to operate in an environmentally sound, reliable, and efficient manner.

We are committed to continuously improving our environmental performance and have established objectives to:

- Continuously improve compliance within our operating permits
- Avoid, reduce, or minimize the environmental footprint of our operations
- Maximize water reuse
- Reduce process air emissions

### MINIMIZING ENVIRONMENTAL IMPACT

CONSOL Energy continues to explore new methods to reduce exposures and minimize the potential for environmental incidents. In 2016, we formed a multidisciplinary, crossfunctional task force charged with assessing the root causes of environmental incidents and developing an objective, data-driven strategy to improve performance. The task force encouraged field level environmental incident review. As a result of one such investigation, secondary containment deficiencies were recognized to be a leading cause of events that resulted in remediation of impacted materials. After identifying the root causes and contributing factors, representatives from HSE and Operations Management led a best practices initiative to better mitigate the containment failures. One significant takeaway following this initiative was the introduction of recycled mining belt on containment areas for our drilling and completions operations. The mining belt provides a soft but durable barrier between the containment and staged equipment. This additional layer of protection also minimizes wear and tear from mobile traffic, pipes, and falling objects. The mining belt also promotes a more stable and safer working surface for employees than plastic products. Containment was discovered to be in overall better condition when removing the mining belt; undamaged sections are able to be repurposed as tertiary containments for tanks and chemical storage on future locations rather than being sent for disposal.

This strategy parallels our overall recycling efforts, which are focused on repurposing used materials, saving landfill space, and generating additional revenue for the Company. In 2016, CONSOL Energy sold more than 1,167 tons of metal and 208 tons of miscellaneous items as scrap. In addition to the industrial materials recycled, nearly 39 tons of paper were recycled at our corporate offices. Going into 2017, we anticipate an increase in this effort as we begin to recycle additional containment from our well sites.

Further examples and relevant data demonstrating our commitment to minimizing our environmental footprint, including air emissions, earth disturbance, and water discharges, can be found in the associated business unit sections later in this report.

### **CONTRACTOR MANAGEMENT**

Due to the integral role service partners play at CONSOL Energy operations, our Supply Chain Management and HSE departments work together to select contractors who adhere to and uphold our core values of safety and compliance. CONSOL Energy strives each year to strengthen the processes that guide our supply.

It is our practice to engage our service partners during routine HSE meetings that serve as a cooperative forum for continuous improvement. These meetings often pair multiple contractors that excel in different service and performance areas. Contractors interface with CONSOL Energy HSE personnel in an open discussion regarding HSE performance, challenges, and risk mitigation. We utilize these discussions as an opportunity to proactively work alongside our contractors and set a positive tone for our HSE performance expectations. Subsequently, contractor performance is evaluated against HSE specific key performance indicators (KPIs). Outcomes of contractor performance reviews and intervention help determine the contractors and service suppliers with whom we continue to do business.

We continue to utilize ISNetworld (ISN), a third-party HSE validation service, to confirm service partner compliance with minimum standards required to perform work at CONSOL Energy operations. To supplement ISN vendor compliance verifications, two new initiatives were launched in 2016:

### **TEAM ALERT**

TEAM Alert was implemented to support our commitment to a safe, healthy, and productive work environment free from the adverse effects of drugs and alcohol at all CONSOL Energy locations. TEAM is a third-party administrator that assists with management of our drug and alcohol free workplace expectations. TEAM's full integration with ISNetworld certifies that all contractors are in compliance with our drug and alcohol testing requirements which exceed those required by the DOT. Its regulatory expertise strengthens our contractor management while mitigating risk.

### VENDOR EVALUATION SCORECARD

The Supply Chain Management, E&P Operations, and HSE teams developed and implemented a contractor evaluation process in 2016. The Vendor Evaluation Scorecard is a quantitative assessment of the efficiency, safety, environmental compliance, and cost effectiveness of contractors that is used in the total cost of ownership analysis and ultimately for vendor selection. The evaluation begins with a questionnaire, followed by site and/or yard visits and allows us to compare and contrast competing companies on technical, commercial, and HSE aspects. Unacceptable scores in the HSE aspects of the evaluation with result in the disqualification of a contractor; however, the process allows for open communication with the prospective contractor to discuss deficiencies and areas of improvement and provides them with an opportunity to improve and avoid disqualification.

In addition to these initiatives, we've implemented a specialized vendor audit program for waste facilities. The purpose of the program is to mitigate risk through verification and documentation of compliance with applicable local, state, and federal regulations. The first step in the process consists of a desktop audit of the waste facility permits and compliance records. If the facility is in compliance with all applicable laws, the desktop audit is followed by a facility site inspection. This program includes specific protocols related to the management of Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM) encountered during well development. Facilities approved to handle or dispose of TENORM with elevated levels of radiation must pass the audit process and have the appropriate license or permit as applicable.

Like many other aspects of our business, success depends on the identification and management of opportunities and risks. By integrating responsibility criteria into our service partner processes, such as health, safety, and environmental expectations, we successfully take advantage of those opportunities by managing our risks, priorities, and bottom line.

### **HSE: LOOKING FORWARD IN 2017**

The HSE team will remain committed to improving safety and environmental performance through field partnerships with our operational teams and contractors. Our goals include the development of a streamlined HSE field handbook, consisting of elements from both our COSH and EMS manuals. We will utilize additional HSE performance data analysis tools to drive specific training opportunities aimed at incident prevention. In addition, we look forward to centralizing our Company-wide waste production volumes and disposal records for inclusion in our 2017 responsibility report.

# **EXPLORATION & PRODUCTION**

- PRODUCED 394.4 BCFE OF NATURAL GAS—A 17% INCREASE OVER 2015
- DROVE OPERATIONAL EFFICIENCY OVER 100%, IMPROVED CAPITAL EFFICIENCY 38%, AND DECREASED LEASE OPERATING COSTS BY 54%
- ACHIEVED 90% WATER RECYCLING RATE IN OUR CORE E&P OPERATING AREAS
- REDUCED AIR EMISSIONS BY OVER 60%
- UNDERWENT RECERTIFICATION TO CRSD PERFORMANCE STANDARDS

Our E&P Division operates, develops, and explores for natural gas in Appalachia (Pennsylvania, West Virginia, Ohio, Virginia, and Tennessee). Our primary focus is the continued development of our Marcellus Shale and Utica acreage. We are proud to be a founding member of the Center for Responsible Shale Development (CRSD), a unique collaboration of environmental organizations, philanthropic foundations, energy producers, and other stakeholders committed to the safe, environmentally responsible development of shale resources in the Appalachian Basin. CRSD's mission is in complete alignment with CONSOL Energy's environmental stewardship commitment, and through a series of 15 performance standards, CRSD provides stakeholders with assurance that shale resources can be produced responsibly to protect the land, water, and air. Energy producers are required to conform to a series of performance standards that are designed to be in line with or more stringent than existing regulatory requirements. Examples of the requirements under the performance standards include the full disclosure of chemicals used in our completions operations; pre- and post- drilling water sampling to ensure our operations do not impact drinking water; recycling of greater than 90% of produced water associated with our unconventional operations; conducting a full Area of Review prior to siting a well location to avoid the potential of unintended subsurface impacts; and the use of strict engine and equipment specifications to reduce emissions to the greatest extent possible. Annual third-party verification of conformance with the standards is required. In December 2016, CONSOL Energy underwent recertification by Bureau Veritas, a third-party auditor selected by CRSD. For audit results and more information including a list of the performance standards, please visit the CRSD website www.responsibleshaledevelopment.org.

### **2016 PERFORMANCE**

In 2016, CONSOL Energy produced 394.4 Bcfe of natural gas, a 17% increase in volume compared to 2015. This growth is being driven by continued improvements in operational efficiency. Capital efficiency has dramatically improved from 1.83 Mcfe/\$ in 2015 to 2.78 Mcfe/\$ in 2016 as a result of increased Estimated Ultimate Recovery (EUR) and reduced capital per well. CONSOL Energy continued development in Greene County, Pennsylvania, with new wells seeing a significant increase in performance having EURs between 3.6-3.8 Bcfe per 1,000 feet of lateral. This was a significant increase over the Company's previous type curve analysis of 3.0-3.5 Bcfe per 1,000 feet of lateral, with some wells performing at over 5.0 Bcfe per 1,000 feet of lateral. Since 2014, our E&P operations has increased EUR/1000' of lateral by over 100%, improved capital deployment by 38%, and reduced lease operating expense by 54%.

After idling rig activity in mid-2015, the E&P operations team focused on maintaining and improving proficiencies across all key areas of operations. These proficiencies included evaluations of best soil cementation practices, minimization of surface disturbance, and a reduction in our containment footprint. We eliminated top-down drilling, thus reducing movement of an additional rig. To eliminate pressure control and safety issues, we standardized production equipment with enhanced automation. In August 2016, our drilling operations resumed using two rigs in Monroe County, Ohio. We immediately applied these process improvements and drilled our first dry Utica well seven days faster than the last well drilled in 2015. The second well exceeded the time goal and was drilled in 26 days, from spud to total depth. We ended the year drilling seven dry Utica Shale wells in the fourth quarter, with an average lateral length of 9,593 feet. Total depth was reached in 24 drilling days per well, two days shorter than previous projections.

### DISSOLUTION OF THE MARCELLUS JOINT VENTURE

In October of 2016, CONSOL Energy and Noble Energy separated the Joint Venture that was formed in 2011 for the exploration, development, and operation of primarily Marcellus Shale properties in Pennsylvania and West Virginia. Post agreement, each party now owns and operates a 100% interest in its properties and wells in two separate operating areas. Moreover, this arrangement provides independent control and flexibility with respect to the scope and timing of future development in our operating area. The separation of the Joint Venture ensures that our core values are maintained while increasing core Marcellus acreage, gaining full control of the stacked pay opportunity set, and incrementally increasing production by 85 MMcfe/d.

MARCELLUS IMPACT	SWPA	wv	СРА	ОН	TOTAL
Net Acres (1)	103,000	62,100	234,300	13,400	412,800
Developed Acreage	19,555	5,318	6,172	173	31,218
Approx. Net Locations (2)	572	411	1,472	85	2,540
Net Locations Acres per Well	146	138	155	155	594
Net Producing Wells (PDPs)	188	34	60	1	283

Net acres updated to include acreage in Monroe County, Ohio; Pennsylvania; and West Virginia not previously included in the joint venture with Noble.
Total net locations calculated from modeling inputs expected lateral lengths and spacing for each respective asset region and formation.

### CONVERTING NON-CORE ACREAGE TO CORE

CONSOL Energy continues to define itself as the Company that will delineate the Utica through operated and non-operated wells, data trades, and data purchases. Our Earth Model provides geologic and reservoir data to evaluate development impact and risk on over 170,000 dry Utica core acres with the potential to increase core position by 250,000+ acres. The Company's non-operated program is delineating over 250,000 acres in the Utica through other operators' drill bits. Today, CONSOL Energy has over 130 wells in the Earth Model, and by the end of 2018 will incorporate at least 30 additional Utica wells.

NON-OP	NON-OPERATED TIL FORECAST (GROSS WELLS)		DELIN	EATION SCHEE	OULE (GROSS	WELLS)	
	2016	2017	2018	2016	2017	2018	2019
Utica	13	17	15	2	3	4	4

### **EMPHASIS ON STACKED PAY DEVELOPMENT**

In 2016, we continued to focus on stacked pay development opportunities for the Marcellus, Utica, and Upper Devonian with over 40 years of drilling inventory identified across the acreage position. Our emphasis on stacked pay is driven by impressive performance from Utica wells drilled in 2016. The Gaut 4IH well in Westmoreland County, Pennsylvania, maintained its position as the second strongest Utica well in the basin, with a production of 7.8 Bcf through the end of 2016. In the fourth quarter, seven Marcellus Shale wells and one Burkett Shale well were turned-inline in Greene County, Pennsylvania. We also targeted multiple horizons on a single pad at the Pittsburgh International Airport in Allegheny County, Pennsylvania. On the eight-well ACAA1 pad, we completed Marcellus, Burkett, and Rhinestreet laterals on three wells in the fourth quarter.

Due to higher volumes and concurrent horizon development, CONSOL Energy is able to maximize production from a single pad, while reducing lifting, gathering, and infrastructure build-out costs. Furthermore, stacked pay development limits our overall footprint, thus reducing land disturbance, traffic, fuel usage, emissions, and impact to the local community. This operational strategy is consistent with our environmental policy and emphasizes our commitment to minimize impacts to critical habitats, water, and air quality.

### WATER MANAGEMENT

We are committed to reducing the water footprint associated with E&P activities. We measure our water impacts in terms of water withdrawal, reuse, and disposal volumes. Differences in our yearover-year performance data are directly attributed to the growth of our E&P operations. As a result of market conditions in 2016, less water was consumed as a whole, coupled with a proportionately larger volume of water being recycled due to decreased drilling activity combined with effective reuse and recycle policies. However, we continued to achieve our CRSD requirement to recycle 90% of our produced water in our core operating areas, as verified by the third-party auditor Bureau Veritas.

For additional information related to our sustainable water management practices, please see our <u>CDP disclosure</u>.



SOURCE	2012	2013	2014	2015	2016
Surface Water	197,664	343,095	900,137	162,668	163,655
Groundwater	0	46,422	21,615	8,872	0
Municipal Water	60,992	39,647	59,438	120,642	53,111
Total Water Withdrawn	258,656	429,163	981,190	292,182	216,716
Water Reused by CONSOL Energy	39,056	79,179	171,732	136,026	138,742
Water Reused by Third Party	0	0	0	2,343	21,992
Total Water Reused as a Percentage of Total Water Withdrawn	15.1%	18.5%	17.5%	47.4%	64%

### TOTAL FRESHWATER WITHDRAWAL BY SOURCE FOR E&P OPERATIONS (THOUSANDS OF GALLONS)

### TOTAL FRESHWATER WITHDRAWAL BY SOURCE FOR E&P OPERATIONS (THOUSANDS OF GALLONS)

REGION	WELL TYPE OR PLAY	VOLUME	METHOD
Virginia*	Coal Bed Methane (CBM)	- 369.60	Reuse Disposal
Central PA **	CBM / Conventional	781.11 3,017.17	Reuse Disposal
Southwestern PA*	CBM / Conventional	17,488.75 975.01	Reuse Disposal
West Virginia*	CBM / Conventional	16.1 <i>7</i> 564.61	Reuse Disposal
Central PA	Marcellus Shale / Unconventional	9,295.28 2,105.26	Reuse Disposal
Central PA*	Utica Shale / Unconventional	1,282.80 235.13	Reuse Disposal
Southwestern PA*	Marcellus Shale / Unconventional	111,948.61 12,656.88	Reuse Disposal
Southwestern PA*	Utica Shale / Unconventional	2,030.76 145,100.04	Reuse Disposal
West Virginia	Marcellus Shale / Unconventional	16,048.76 6,731.42	Reuse Disposal
Ohio*	Marcellus Shale / Unconventional	79.22 1,107.01	Reuse Disposal
Ohio*	Utica Shale / Unconventional	1,793.74 21,780.22	Reuse Disposal

\* Disposal via Permitted UIC Injection \*\* Disposal via Permitted UIC Injection or Permitted Treatment & Discharge

### **AIR QUALITY**

Climate change, emissions reductions, and sustainable energy production are common areas of focus amongst the regulatory and oil & gas communities. In line with these themes, CONSOL Energy has implemented an air quality strategy consisting of five components: tracking regulatory requirements, engaging in stakeholder dialogue, understanding our emissions, identifying opportunities to improve performance, and implementing reduction strategies.

Our regulatory affairs team follows developing local, state, and federal air quality regulations that could potentially impact our operations. To shape emerging compliance requirements, our air quality compliance and permitting specialists participate in technical working groups alongside industry peers and regulators. We convey this approach and our emissions inventory to third parties and other stakeholders through our continued participation in multiple disclosure assessments, such as <u>CDP</u>. Within these assessments, we report our indirect and lifecycle emissions in addition to direct emissions associated with our operational activities. Through technical stakeholder engagement, we ensure that our operations are prepared for the future.

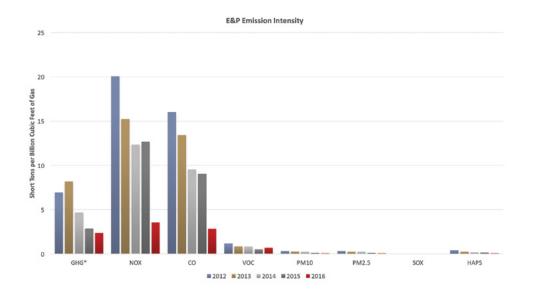
Achieving the most accurate and complete representation of our Greenhouse Gas (GHG) emissions continues to be one of our top environmental priorities. We've identified opportunities to optimize emissions data collection and plan to implement an Environmental Management Information System (EMIS) to increase the ease of both data storage and monitoring of compliance with regulatory requirements. Our inventories have evolved from including select sources based on mandatory regulatory requirements to development of a comprehensive emissions inventory including sources not previously characterized such as fugitive leaks, tanks, blowdown events, and pigging operations. Expansion of our inventory allows us to identify our largest emissions sources and opportunities for targeted reductions. As a member of CRSD, and in the spirit of continuous improvement, we've voluntarily adopted operational emissions reduction strategies that go above and beyond current regulatory requirements. These standard practices include, but are not limited to:

- The exclusive use of green completions, in which gas produced during flowback operations is captured, rather than being vented to the atmosphere.
- Flaring gas at 98% efficiency only in cases of low flammability content or if necessary due to site safety concerns.
- Use of ultra-low sulfur diesel fuel for all non-road equipment during operations.
- Requiring 95% of contractor drilling rig engines and 75% of contractor diesel fracturing pump engines to achieve compliance with U.S. EPA Tier 4 Emissions Standards for particulate matter.
- Requiring 80% of contractor heavy-duty engines used to power fracturing pumps and 95% of freshwater transport trucks to comply with U.S. EPA Final Particulate Matter Emission Standards for 2007 and Later Model Year Heavy-Duty Vehicles and Engines.
- Stack testing all dedicated unconventional compressor engines greater than 100 HP to ensure maintenance of specifications for VOC, CO, and NOx emission levels.
- Installing emissions controls on every tank or storage vessel located at an unconventional well pad with potential VOC emissions in excess of 6 tons per year.
- Utilizing only low-bleed pneumatic controllers serving unconventional pads, with a natural gas bleed rate of less than 6.0 scf/hr.
- Implementing a Directed Inspection and Maintenance (DI & M) program in order to identify and repair equipment leaks. Inspections are conducted using Forward Looking Infrared (FLIR) cameras.

### EMISSIONS PERFORMANCE

Our commitment to these voluntary best management practices and operational efficiencies was evident in our 2016 emissions inventory. Overall, our E&P operations achieved a 60% reduction in emissions criteria compared to 2015, on a ton per billion cubic feet of gas produced basis. This reduction is notable considering that, for the first time, our expanded inventory assessment was completed for our E&P activities.

In addition to improvements in direct emissions from our operations, CONSOL Energy reports an indirect emissions reduction of more than 5% compared to 2015. The overall improvement is attributable to measures such as the consolidation of two office locations and a reduction in the size of CONSOL Energy's vehicle fleet. Fuel purchased for use by off-road vehicles and equipment was also reduced due to a decrease in operational activity levels.



2016 GHG EMISSIONS (THOUSANDS METRIC TONS CO2)	(EQ))	
Total Direct GHG Emissions (Scope 1)	1235.83	
Total Indirect GHG Emissions (Scope 2)	599.02	
Total Other Indirect GHG Emissions (Scope 3)	20150.52	
Total GHG Emissions	21985.37	
Total Direct GHG Emissions (metric tons CO2 eq./\$100,000 E&P Revenue)	119.65	

### CRITERIA POLLUTANTS (SHORT TONS)

Carbon Monoxide	1123.19
Nitrogen Oxides	1401.26
Volatile Organic Compounds	271.89
PM10	26.96
PM2.5	26.73
SO2	1.23

### BIODIVERSITY

CONSOL Energy's biodiversity policy focuses on habitat protection, avoidance, restoration, and compensation. We understand that proper management of biodiversity is important to ensure the continued availability of suitable habitats for species survival and use as a natural resource for humanity within our operating regions. All field employees and contractors participate in an annual training module focused on this policy and identification of habitat and sensitive species, as well as decontamination practices to prevent dispersion of invasive species. We consider protection of biodiversity throughout all phases of operation, from project concept to site restoration. In accordance with local and federal environmental regulations, our permitting, operations, and HSE teams work together to evaluate potential impacts to species and habitats during project planning. When our projects are located in proximity to protected species or habitats, we work to identify and delineate exclusion zones and time frames for work. Where impacts are unavoidable, we develop enhanced mitigation strategies subject to regulatory agency approval.

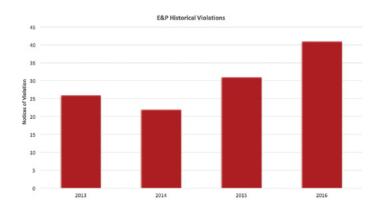
Much of our operating footprint is located within areas identified by the US Fish & Wildlife Service (USFWS) as supporting habitat suitable for both the Indiana Bat, an endangered species, and the Northern Long-Eared Bat, a threatened species. Where known colonies of these sensitive species overlap our project area, we incorporate the bats' seasonal movements into project planning. Where necessary, CONSOL Energy has constructed new bat hibernacula under the guidance of an outside expert with the approval of regulatory agencies.

In 2016, when our E&P operations team was challenged to route a 5-mile waterline through a heavily wooded area containing significant aquatic resources in Monroe County, Ohio, CONSOL Energy's biodiversity strategy was put into practice. During conceptual design, potential impacts including 41 acres of earth disturbance, 15 acres of tree clearing, 0.1 acres of wetlands, and 350 linear feet of stream were identified. Through creative and selective route planning, no tree clearing was required and encroachment of 7 streams and 6 wetlands was avoided. During construction and operation, emphasis was placed on best practices for erosion and sedimentation control, and the project was completed successfully without environmental incident.

### **E&P HSE PERFORMANCE SUMMARY**

In 2016, our E&P employees completed the year without exception. As it is our goal for our contractors to achieve this same level of success, we placed an emphasis on service partner training throughout the year. In addition to their own scheduled material, our service providers present their employees with the same HSE meeting content that is presented to our own employees on a weekly basis. As a result of this effort, our total number of exceptions decreased by 46%, year over year.

Regarding environmental performance, our total spill count and number of violations received in 2016 increased, year over year. Of the 42 violations received in 2016, one was characterized by the Pennsylvania DEP as significant and accounts for 57% of civil penalty payments made in this time frame. This violation was associated with construction outside of the limit of disturbance approved in 19 separate general permits. In response, standard operating procedures related to field identification and confirmation of permit boundaries were developed.



2016 PERFORMANCE INDICATORS				
Drilling Permits Received	84			
Total Bonds and Letters of Credit	\$13,946,047			
Spills ≥ 1 BBL Off Containment	43			
Penalties Paid	\$246,450			
Total Recordable Injury Frequency Rate (employees)	0.00			
Total Recordable Injury Frequency Rate (contractors)	1.02			
Lost Work Day Incident Rate (employees)	0.00			
Work Related Fatalities (employees)	0			
Work Related Fatalities (contractors)	0			

### **E&P: LOOKING FORWARD IN 2017**

Looking into 2017, we expect to continue this performance with 58 wells expected to turn-in-line (TIL) and an expected production growth of 20%. We will continue to focus on coupling technical advances with lean manufacturing by reviewing operations segment-by-segment to drive operational efficiencies.



# **CONE MIDSTREAM PARTNERS LP**

- MOVED 1,354B BTU/DAY THROUGH OUR PIPELINES AND COMPRESSOR STATIONS
- REALIZED NET INCOME OF \$96.5MM
- REDUCED CRITERIA AIR POLLUTANTS 46-78%, RESPECTIVELY
- IMPROVED ENVIRONMENTAL PERFORMANCE BY 69%

CONE Midstream is a master limited partnership formed in May 2014 by CONSOL Energy Inc. and Noble Energy, Inc. (Sponsors). The partnership was developed primarily to own, operate, develop, and acquire natural gas gathering and other midstream energy assets to service its Sponsors' production in the Marcellus Shale in Pennsylvania and West Virginia. CONE Midstream's assets include natural gas gathering pipelines and compression and dehydration facilities, as well as condensate gathering, collection, separation, and stabilization facilities. As of December 31, 2016, the existing dedicated acreage to CONE Midstream covered approximately 515,000 aggregate net acres, which is subject to the release provisions set forth in the gas gathering agreements with each of the Sponsors. In 2016 CONE installed just over 7 miles of new gas gathering pipelines and secured 100% ownership of CONE's Anchor System assets.

A summary of the structure of CONE Midstream, its relationship with CONSOL Energy Inc. and Noble Energy Inc., and the acreage dedicated to the Partnership and related gas gathering agreements is available in CONE's 2016 Form 10-K (pp. 5-13).

### **GATHERING ASSETS**

As of December 31, 2016, our gathering assets comprised a network of 254 miles of gathering pipelines with an average daily throughput of approximately 1,354 BBtu/d. In addition, we operate two condensate handling facilities–in Majorsville, Pennsylvania (Anchor Systems) and Moundsville, West Virginia (Additional Systems)–that provide condensate gathering, collection, separation and stabilization services. Each facility has nominal handling capacities of 2,500 Bbl/d.

The following table provides information regarding our gathering assets as of, and with respect to, average daily throughput, for the year ended December 31, 2016:

SYSTEM	OUR OWNERSHIP INTEREST	GAS TYPE	PIPELINES (MILES)	AVERAGE DAILY THROUGHPUT (BBTU/D)	MAXIMUM INTERCONNECT CAPACITY1,2 (BBTU/D)	COMPRESSION (HORSEPOWER)
Anchor	100	Dry/Wet	175	1,100	1,429	75,150
Growth	5	Dry/Wet	31	69	860	6,700
Additional	5	Dry/Wet	48	185	545	9,480

Maximum interconnect capacity is the maximum throughput that can be delivered from the system through physical interconnections to third-party facilities or pipelines.
Our midstream systems currently have interconnects with the following interstate pipelines: Columbia Gas Transmission, Texas Eastern Transmission, and Dominion Transmission, Inc.

### **OPERATIONAL HIGHLIGHTS**

The Partnership saw continued growth in its financial performance during the year ended December 31, 2016. Compared to the year ended December 31, 2015, results attributable to the general and limited partner ownership interests in the Partnership were as follows:

- Net income of \$96.5 million as compared to \$71.2 million
- Average daily throughput volumes of 1,354 Btu per day (BBtu/d) (or 869 BBtu/d net to the Partnership) as compared to the 1,099 BBtu/d (or 629 BBtu/d net to the Partnership)
- Adjusted EBITDA of \$110.5 million as compared to \$80.3 million
- Net cash flows provided by operating activities of \$160.1 million as compared to \$116.0 million
- Distributable cash flow of \$96.2 million as compared to \$70.9 million

In addition, current year operating cash flows exceeded the sum of capital expenditures (\$50.7 million), distributions to unitholders (\$59.7 million), and interest paid (\$1.6 million) during the year ended December 31, 2016. This exceedance was used to partially fund our acquisition of the remaining 25% noncontrolling interest in the Anchor Systems. Amounts outstanding under our revolving credit facility increased by \$93.5 million during the year ended December 31, 2016, despite paying \$140 million to CONE Gathering upon the closing of our acquisition of the remaining interests in the Anchor Systems.

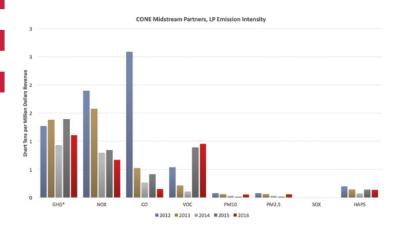
CRITERIA POLLUTANTS (SHORT TONS)					
Carbon Monoxide	36.34				
Nitrogen Oxides	160.10				
Volatile Organic Compounds	228.79				
PM10	13.29				
PM2.5	13.31				
SO2	0.77				

### **HSE EMPHASIS**

CONE Midstream mirrors CONSOL Energy's commitment to our core values of safety and environmental compliance. Our project teams have made a concerted effort to develop processes that improve pipeline routing in order to facilitate safe construction, ensure permit compliance, minimize environmental impact, and promote long-term slope stability. For instance, we work closely with our Sponsors to co-locate water pipelines with gas gathering pipelines in shared rights-of-way, where feasible. This results in a reduced area of disturbance, as well as capital efficiency.

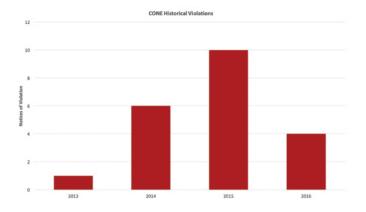
CONE Midstream participates alongside CONSOL Energy in the Center for Responsible Shale Development (CRSD) operator certification process. Although CONE is not a CRSD member, our midstream facilities conform to the standards and principles set forth by CRSD. As such, emissions controls are not only forefront in facility design, but they are often consistent with our compression optimization strategies. This approach was exemplified in 2016, with the addition of dehydration capacity at our Hopewell compressor station. This additional capacity allowed five decentralized dehydrators to be decommissioned. As a result, the gathering field realized significant net reductions of NOx (46%), CO (78%), VOC (77%), and GHG as CO2e (47%) emissions.

The comprehensive emissions characterization approach employed by CONSOL Energy was utilized to assess CONE's emissions for the second consecutive year. As a result of our team's creativity on projects like Hopewell, CONE's overall emissions intensity was reduced by approximately 15% in comparison to 2015.



### **CONE HSE PERFORMANCE SUMMARY**

In 2016, our CONE employees completed the year without exception. This is consistent with past performance, as CONE personnel have not suffered a lost time incident since the MLP's inception. Our environmental compliance record improved, year over year, as demonstrated by a 60% reduction in notices of violation.



2016 PERFORMANCE INDICATORS				
Miles of Pipeline Permitted	57.77			
Total Bonds and Letters of Credit	\$2,669,075			
Spills ≥ 1 BBL Off Containment	3			
Penalties Paid	\$87,000			
Total Recordable Injury Frequency Rate (employees)	0.00			
Total Recordable Injury Frequency Rate (contractors)	4.01			
Lost Work Day Incident Rate (employees)	0.00			
Work Related Fatalities (employees)	0			
Work Related Fatalities (contractors)	0			

### **CONE: LOOKING FORWARD IN 2017**

In 2017, CONE will continue to pursue operational efficiencies that support financial performance and sustainable growth for the future. We intend to employ focused training programs to drive improved contractor safety performance in 2017 while maintaining our emphasis on environmental compliance.



# **DIVERSIFIED BUSINESS UNITS**

- FORMED DBU TO UNLOCK THE VALUE IN OUR NON-CORE BUSINESS INTERESTS
- DBU CONTRACTORS WORKED AT ZERO IN 2016
- CONVEY TRANSPORTED 15.7MM BARRELS OF WATER SAFELY AND COMPLIANTLY
- CONSOL ENERGY HAS OVER 44,000 ACRES OF LAND ENROLLED IN PUBLIC ACCESS PROGRAMS
- OPTIMIZED OUR FACILITIES THAT TREAT ACID MINE DRAINAGE WATER TO INCREASE COMPLIANCE AND IMPROVE EFFICIENCY AS WELL AS REDUCE COSTS

In order to unlock the potential of non-E&P operations, CONSOL Energy made a strategic decision to focus management attention on these business interests. These interests include our water management company CONVEY Water Systems, LLC.; our extensive real estate holdings operated by CNX Land, LLC; our coal export terminal CNX Marine Terminal, Inc. located in Baltimore, Maryland; and the management of our legacy obligations such as Coal Act retiree medical benefits, reclamation of Closed Mines, and management of our acid mine drainage treatment facilities.

By focusing management of these strategic non-core assets and obligations separate from our ongoing interests, CONSOL Energy was able to realize enhanced productivity and, more importantly, profitability. It also resulted in dramatic reduction in operating costs by enhancing efficiency and further improving compliance. Highlights from each of the operations are outlined below.

### **CONVEY WATER SYSTEMS, LLC**

CONSOL Energy recognizes the inherent value of water and continues to focus on the responsible use and protection of this valuable natural resource for the benefit of all stakeholders. In 2016, CONVEY Water Systems, LLC strengthened its commitment to provide water-related services in a safe and environmentally responsible manner. As part of this effort, we continue to evaluate emerging treatment technologies and champion the reuse of produced fluids amongst like-minded operators in the Marcellus and Utica Basin. These activities support our strategic vision of water asset management, where the innovative use of existing water assets not only maintains the highest standards of environmental protection, but also creates value for the Company. Our water assets provide the Company with significant operational benefits as well as business opportunities. For the fourth year in a row, CONVEY increased water use and sharing agreements with third-party consumers. This has the benefit of reducing the footprint of shale gas-related water infrastructure and the need for trucking water while responsibly utilizing approved resources. We continued to pursue water treatment and reuse technologies including the potential for beneficial use of byproducts resulting from water treatment, all of which can positively impact water asset management and financial performance.

In support of our E&P operations, CONVEY continues to focus on handling every aspect of water from sourcing to disposal with accurate tracking to the gallon level. Understanding the true all-in cost of the life cycle of water allows all to benefit from operational efficiencies while reducing Lease Operating Expenses (LOE). From an operational perspective, we continue to focus on three key areas of water resource management: minimizing impacts to local water resources, maximizing recycling/reuse of process waters, and increasing our footprint in third-party sales that encompass the full life cycle of water.

In 2016-CONVEY handled 15.7 MM barrels of water in a year where rig count was abnormally low throughout the entire basin. Although freshwater delivery may have been lower than normal, there was an increase in the need to handle flowback and production water in the most economically and environmentally responsible manner possible.

### **BARNESVILLE UIC**

CONVEY's Barnesville UIC well played an integral role in minimizing additional costs associated with disposal in 2016. The facility underwent several improvements including an acid frac and chemical/filtration system optimization. The result was a 60% capacity gain and a 40% reduction in cost per barrel. Additionally, the UIC well began accepting third-party customers, creating a new revenue stream for CONVEY. Currently, there are four contracts signed with trucking vendors and E&P operators that utilize the well for disposal. Additional third party volumes and cost improvements projects are scheduled for 2017, allowing for increased cost savings and third-party profit.

Third-party-operated UIC wells are also regularly utilized by CONVEY for water disposal when more economical due to proximity. CONVEY has developed an internal process to evaluate the potential for induced seismicity associated with these Class II saltwater injection wells. As part of our Waste Vendor Auditing System, we utilize a stepwise screening process to avoid injection wells that have a high potential to induce seismicity. This includes avoiding wells located within a buffer zone around areas of known faults or increased seismic activity and a review of well logs to ensure that the wells are not injecting into or above a formation with increased seismicity risk. We believe that, with sound management practices, Class II saltwater injection wells can provide a safe and effective method for disposal.

### WASHINGTON DAMS

In 2011 CONSOL Energy purchased two reservoirs just south of Washington, Pennsylvania, Washington Dam #3 and Washington Dam #4. Collectively, these reservoirs store over 1 billion gallons of water for CONSOL Energy's use in natural gas well development and coal mining operations. The dams were originally constructed in 1895 and when purchased in 2011, required upgrades to comply with current PADEP Dam Safety standards.

The most notable of these upgrades was complete reconstruction of the emergency spillways. After a year of construction, the new spillway for Dam #3 is nearly complete. This design maximizes water flow while keeping the spillway as narrow as possible. Dam #3's spillway can now pass nearly 5,000,000 gallons of water per minute. The construction of Dam #3's new spillway is a testament to CONSOL Energy's number one core value, safety. This project, with a \$4,500,000 budget, was constructed with zero OSHA recordable accidents and zero Reportable Personal Injuries (RPI).

Preparations are being made for the construction of Dam #4's new spillway in the years to come. Dam #4 presents increased challenges, considering the reservoir is nearly three times larger and the dam nearly twice as high as Dam #3. However, with our knowledge gained at Dam #3 and through our efforts to continuously improve, we anticipate \$1,000,000 reduction in our estimated construction costs. The Washington Dams have been around for over 120 years. With their new spillways, they will safely remain for many years to come.



### **DBU LAND MANAGEMENT**

Over CONSOL Energy's 150 years in business, the Company has acquired thousands of acres to support our operational advancements. In some cases, CONSOL Energy acquired mineral rights and surface rights were an unintended part of the acquisition and in other cases, surface rights were needed to support operational activities. Over time, these acquisitions have accumulated and today CONSOL Energy is the owner of approximately 300,000 acres of surface lands which are managed by DBU. The DBU Land group is charged with management of land resources with the dual objective of supporting CONSOL's operations and generating value from third-party entities while upholding CONSOL Energy's core values of safety, compliance, and continuous improvement. Third-party revenue comes from requests to use land, providing agricultural or hunting lease programs, timber harvesting programs, and non-core divestiture opportunities. Active management of these multifunctional assets, not only for CONSOL Energy use, ultimately leads to the highest and best use of our land.

### THIRD-PARTY SURFACE AGREEMENTS

CONSOL Energy continuously looks for creative ways to manage our lands and make better use of surface properties. Each year, DBU receives scores of requests from third parties requesting to access our property for a variety of uses ranging from easements and rights-of-ways, to Surface Use Agreements and License Agreements. These requests are then vetted with specific business groups within CONSOL Energy to determine the best use of the land. Not only does this third-party coordination foster better relationships, but it increases the potential use and value for each tract of land.

Many of the surface tracts CONSOL Energy owns are prime agricultural or timber resources. When there is no longer a need for acreage to support operations, DBU actively manages the land as agricultural or timber resources. CONSOL Energy seeks to partner with local farmers or ranchers to return or keep lands in use as agricultural resources. CONSOL Energy's active timber harvest program is managed with the support of a professional forester with a goal of sustainable harvesting and active management focused on improving and creating wildlife habitat which, in turn, will lead to greater forest biodiversity and advanced wildlife species composition. Proper forest management can result in improved regeneration which leads to sustained harvesting projects and revenue generation for many years.

### ASSET MONETIZATION

The DBU land team directs monetization of the Company's noncore assets. This includes oversight of royalty payments associated with more than 200,000 coal acres leased or under contract by third-party operators as well as joint ownership in an 88 MW electric generation facility in Buchanan County, Virginia. Most importantly, in support of CONSOL Energy's transformational strategy, we manage the divestiture of non-core assets of the Company. This includes land assets as well as mineral assets (coal or gas). These are typically defined as assets outside of our operating areas and involve many layers of coordination. Once these business measures are completed, DBU remains engaged to facilitate post-closing requirements including accounting measures, waivers, consents, and perpetual cooperation obligations.

### CONSERVATION AND DONATIONS

CONSOL Energy also has a long history of providing surface lands to state and wildlife agencies for conservation measures and plans to provide an additional 1,500 acres to such agencies in 2017. Along with the conservation tracts, other lands are made available for public enjoyment through state co-operative access programs. CONSOL Energy currently has more than 44,000 acres enrolled in public access programs in various states. These programs provide CONSOL Energy the ability to enroll surface lands with wildlife agencies to permit land access for public recreational activities including hiking, birding, fishing, and hunting. These programs foster partnerships with wildlife law enforcement officials to improve public hunting opportunities and wildlife habitat on surface lands.

### CNX MARINE TERMINAL, INC.

CONSOL Energy's Terminal, located in the Port of Baltimore, exports coal to countries in Europe, South America, Asia and Southeast Asia, and South America. It is unique along the eastern seaboard because it is served by two railroads—Norfolk Southern and CSX–and can load deep draft vessels including Panamex and Cape-size. The terminal is also differentiated by its throughput capacity of 15 million tons per year, a coal storage yard of 1.1 million tons, and its capability to create specialty metallurgical coal blends from different coal specifications.

Until mid-2016, the Terminal served solely as a captive service provider to CONSOL Energy owned or partnered mines. In order to unlock the Terminal's full potential, we needed to separate it as a standalone, for-profit business, and focus management attention necessary to grow EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization).

We focused on two fundamentals: increasing revenue and reducing costs. We opened the Terminal fully to third-party business and put in place contracts with market-based terms to increase revenue. We took a zero-based budgeting approach to eliminate non-essential items, restructured work hours to bring labor costs in line, and utilized contract labor during periods of higher demand. This resulted in dramatic improvements in the fourth quarter, increasing throughput by 35% and increasing EBITDA correspondingly over PO. This was all done while keeping our core values of safety and compliance at the fore. The Terminal workforce finished the year At ZERO and in full compliance with all permits and laws.

### LEGACY OPERATIONS

The Legacy Operations team oversees operation of 40 mine water treatment facilities and 33 closed mine operations distributed across six states, with the ultimate goal of reducing the Company's footprint and minimizing our liabilities. Our water treatment facilities cover a wide spectrum of treatment technologies from passive biological systems, to conventional sewage and acid mine drainage treatment. The operation of all facilities is based on three key sustainable principles:

- 1. Minimization of waste generated through water treatment optimization studies,
- Reduction in the volume of water treated and discharged based on mine pool management and flooding studies, and
- Limiting impact to streams during low flow periods when natural recharge from rainfall is limited by operation of managed discharges.

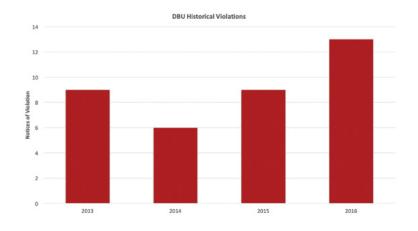
Implementation of this strategy is made possible by our focus on proactive surface mine reclamation efforts. These efforts included the removal of mine water retention ponds and associated discharge outlets to facilitate permit closure. In 2016, three former mining permits were completely retired, and an additional two mining permits were partially retired. This resulted in a total reduction in bond of \$8.3 million associated with 538 acres. More importantly, these efforts materialized post operational land uses endorsed by both the community and regulatory agencies.





### **DBU HSE PERFORMANCE SUMMARY**

In 2016, our DBU employees and contractors completed the year At ZERO. This accomplishment is substantial, given the significant hazards our DBU employees and contractors are exposed to across a variety of operational circumstances. With regard to Environmental Performance, although the number of violations increased in 2016, the DBU team maintained a 99.9% compliance record with NPDES permit requirements for the second consecutive year.



2016 PERFORMANCE INDICATORS		
Environmental Permits	73	
Total Acreage Released from Bond	538	
Total Bonds Released	\$8,300,000	
Volume of Treated Water Discharged	11.8 Billion Gallons	
NPDES Permit Compliance Rate (%)	99.9	
Spills ≥ 1 BBL off containment	6	
Penalties Paid	\$1,156	
Total Recordable Injury Frequency Rate (employees)	At ZERO	
Total Recordable Injury Frequency Rate (contractors)	At ZERO	
Lost Work Day Incident Rate (employees)	0.00	
Work Related Fatalities (employees)	0	
Work Related Fatalities (contractors)	0	

### **DBU: LOOKING FORWARD IN 2017**

In 2017, the DBU team will continue to be focused on deriving value from the Company's non-core assets in support of our strategic goals. CONVEY will remain focused on improving the economics of water recycling/reuse through cooperative agreements with other E&P companies and integration of water management on a regional scale.



# **INTERNAL COMMUNITY**

- 82.6% OF FULL-TIME EMPLOYEES PARTICIPATED IN OUR WELL-BEING PROGRAM
- HOSTED EMPLOYEE ENGAGEMENT ACTIVITIES DESIGNED FOR EMPLOYEES AND THEIR FAMILIES TO CULTIVATE A SENSE OF FAMILY AND FUN
- ROLLED OUT A SPECIALIZED DEVELOPMENT PROGRAM FOR NEW ENGINEERS COMING ON BOARD-OUR E3 PROGRAM

At CONSOL Energy we recognize that without our employees we are not much more than a fantastic set of assets. A company such as ours does not survive, thrive, and lead the industry for over 150 years without employees who are motivated, focused, and driven by values. 2016 saw more change at CONSOL Energy with transformations in company structure and personnel. This year we made great strides toward dividing our coal and gas assets. Our HR team played a huge role in helping our employees navigate the changing environment by encouraging them to stay focused and motivated through employee engagement activities and incentives.

We hosted several events designed to cultivate a sense of family and fun including:

- Take Our Daughters and Sons to Work Day
- Pittsburgh sports-themed spirit days
- Stanley Cup celebration
- Donut & coffee breakfast
- Ultimate Pittsburgh Penguins fan contest
- "Pastries & Politics" discussions
- A year-end holiday celebration
- Fall Festival

Despite the market challenges we faced in 2016, we are proud that our employees adapted and remained focused on our commitment to reaching our goals and upholding our core values of safety, compliance, and continuous improvement. In 2016, our leaders continued to drive the spirit of "Positively CONSOL," a management initiative that we have woven into our culture and adopted to set a new standard for how we lead our people. Using the science of human behavior, "Positively CONSOL" relies on the power of positive reinforcement to encourage our employees to work to their greatest potential, maximizing CONSOL Energy's long-term performance. These principles teach us to reinforce the behaviors that lead to good decisionmaking and discretionary effort. Updates were made to our incentive programs to further align with this philosophy. Our employees receive monthly Short Term Incentive Compensation (STIC) based on safety, environmental, and economic criteria. The monthly STIC reflects the immediate and certain positive feedback, a fundamental principle of "Positively CONSOL." Through the challenging year for the industry, CONSOL Energy rose to the occasion and increased efficiencies and innovated cost savings. Thus, our employees reaped rewards unlike any seen by our peers in the market. In addition, these achievements worked to further elevate CONSOL Energy as a leading entity in the Appalachian Basin. However, engagement events and bonus payments alone are not the only ways that we focus on employee sustainability.

We recognize that a truly motivated employee is built on multiple levels of satisfaction–not only good management and incented bonus payments, but also flexible health benefits, personal wellness, and professional development.

### **HEALTH BENEFITS**

In 2016, we continued to encourage our employees to take an active part in managing their healthcare benefits. The concept of "consumerism" has become a very important part of today's society as we all navigate a changing healthcare system. Accordingly, our health benefit options have evolved so that our employees can make informed decisions as to which plan is best for their individual situations and yearly healthcare spending. Our employees enjoy a wide range of optional benefits in addition to medical insurance. Many of the recent changes to our benefit programs have made them more efficient for our employees with respect to cost and time, such as the addition of a Health Savings Account (HSA) or Health Reimbursement Account (HRA) and Telemedicine. Our goal is to provide our employees with the best coverage we can at a competitive price, with the tools they need to maximize their healthcare contributions.

### WELL-BEING

2016 marks the sixth year of CONSOL Energy's Well-Being Program, which was established to increase individual health awareness. This year 82.6% of full-time employees chose to take charge of their health by completing comprehensive lab screening. Additionally, in the fourth quarter of 2016, CONSOL Energy took the next step toward our goal by implementing an on-site behavior-based intervention wellness tool, Wellness Coaches. These Wellness Coaches work to build relationships and provide one-on-one support to all employees to help them identify and reach their unique goals for health and well-being. The behavior-based intervention focuses on the four major areas known to combat the seven chronic diseases:

- Physical (Exercise & Nutritional Counseling)
- Mental (Behavior Modification & Mental Strengthening)
- Emotional (Lifestyle Balance Training & Social Connected Platforms)
- Mindfulness

Within three months of launching the behavior-based program, over 33% of the employee population engaged in one or more coaching sessions. Looking forward, CONSOL Energy will continue its efforts toward employee wellness engagement by implementing Companywide wellness challenges and periodic "Lunch & Learns." The goal of the Company's Well-Being Program is to ensure that employee wellness goals become actionable behaviors, resulting in improved health and wellness.

### **EMPLOYEE DEVELOPMENT**

Investing in the development of our employees is just one more way that we are devoted to attracting, retaining, motivating, and growing the core of our business: our people. In 2016, we continued to offer our salaried employees open access to a vast library of web-based training resources through our Learning Management System, The CONSOL Energy LearnCenter. Whether our employees need a justin-time solution to a Microsoft Office question or are seeking deeper development in leadership, team-building, or specialized IT skills, our online LearnCenter is a resource available to them 24/7. During the year, 100% of our salaried employees participated in multiple eLearning opportunities ranging from policy awareness to safety training and even personal development. In addition to on-demand, flexible learning, our LearnCenter also offers employees a chance to maintain their professional certifications in the fields of engineering and legal studies. Employees from every segment of our business use this system differently, and we continue to seek new ways to use the LearnCenter to bring solutions and growth opportunities to our employees.

Safety, compliance, specialized leadership, and technical courses were also offered to employees last year. Some of the courses developed and offered in 2016 include "A Question of Ethics," Active Shooter Preparedness, Competent Rigger, Steel Tank Inspection Certification, Fire School, Forklift Operation, and Fall Protection classes, among others. Whether it was the Gas Operations Training Academy, the corporate headquarters, or a field office, our employees continued to receive top-quality training designed to meet our high standards in safety, compliance, and continuous improvement.

Onsite and online training is not the only way that our employees participate in growth opportunities. In 2016, we had 60 employees participate in our Educational Reimbursement Plan. This plan provides financial assistance to employees who participate in externally sponsored educational courses. The investment in our employees' education demonstrates the value we place on fostering career development and continuous improvement. Through this program we have employees working towards MBA's, Bachelor's and Associate degrees at institutions such as Carnegie Mellon University, Penn State, Texas A&M, and the University of Pittsburgh. In 2016, CONSOL Energy contributed over \$189,000 toward educational reimbursement for our employees.

In addition to these open opportunities, specialized development programs have been well received and encouraged by our top leadership. Our Engineering, Exposure, Experience (E3) Rotational Engineer Program is an example of a successful employee development program. The first group of participants completed the program in 2016. The E3 program was designed as a developmental cohort for new engineers as a way to come into the Company with little to no prior experience. Their participation in the 18-month rotational program gave them exposure to all facets of our operations. Part of their participation included a "Fresh Eyes" continuous improvement project geared towards implementing operational efficiencies and cost-reduction strategies. On August 15, 2016, seven "E3" engineers participated in our first "Fresh Eyes Showcase," interacting with top leadership within CONSOL Energy. The showcase featured the engineers' ideas and progress for their individual continuous improvement projects, but more importantly it featured seven high-potential employees, ready to enter our workforce polished, educated about the Company and our critical path, and ready to continue working hard to make their mark. Early assessments estimate that the projects the E3 members designed would result in a collective cost savings of over \$2 million.

# **EXTERNAL COMMUNITY**

- FOCUSED OUR CHARITABLE EFFORTS THROUGH A "MONTH OF GIVING" AROUND THE HOLIDAY SEASON TO SUPPORT OUR COMMUNITIES IN KEEPING THEM SAFE AND HEALTHY
- HELD AN ANALYST AND INVESTOR DAY TO SHOWCASE THE OPERATIONAL PROGRESS WE'VE MADE IN THE LAST TWO YEARS

### CONTRIBUTED OVER \$184MM IN DIRECT ECONOMIC CONTRIBUTIONS TO OUR LOCAL COMMUNITIES

Empowering the communities in which we operate by investing in local organizations, communicating with our stakeholders, providing educational opportunities, developing partnerships ,and mobilizing resources to connect people and inspire positive, substantive change is part of CONSOL Energy's commitment to being a responsible corporate citizen and a good neighbor.

### **OUR STAKEHOLDERS**

Our stakeholders are defined as those people or groups who are potentially affected by our operations or who have an interest in, or influence over, how we operate our business. On a daily basis, our Company interacts with a diverse range of stakeholders related to a wide range of topics. Below is a list of some of our stakeholders and many of the ways we engage with them.

STAKEHOLDER	ENGAGEMENT	FREQUENCY
Business Partners	Joint venture board meetings; HSE audits	As needed
Customers	Communications through our marketing department	As needed
Investors	Annual Shareholder Meeting; Conferences; Roadshows; Analyst Day	Continuous
Members of the Community	Public notices; Public meetings; Social media; Community-sponsored events	As needed
Employees	Intranet postings; Quarterly town hall meetings led by our CEO and executive management team; 24-hour compliance hotline	Continuous
Contractors	Scheduled safety meetings; HSE audits; Annual Core Values Summit	Continuous
Elected Officials and Regulators	Required regulatory reporting; Public meetings; Political Action Committee	Ongoing
Media	News releases; Interviews; Publicly available reports; Social media	Ongoing
NGOs	Publicly available reporting	As requested

Another way we engage with our stakeholders is through our membership in trade organizations. Below is a list of major organizations of which CONSOL Energy is an active participant.

Allegheny Conference on Community Development Center for Responsible Shale Development (CRSD) Independent Petroleum Association of America (IPAA) Marcellus Shale Coalition (MSC) Ohio Oil & Gas Association (OOGA) U.S. Chamber of Commerce Virginia Oil and Gas Association (VOGA) West Virginia Oil and Natural Gas Association (WVONGA)



# **EXTERNAL COMMUNITY**

## **COMMUNITY INVESTMENT**

In 2016, our Company made monetary grants in human services and educational organizations focusing on sustainable change and building strong, healthy communities. Finding ways beyond our community investment budget to engage community stakeholders also remained a part of our community outreach initiatives in 2016. Through Company-sponsored events and activities, we continued to strengthen relationships and develop new partnerships, spending time and resources on not only educating these groups and individuals on energy development, but also making them aware of our high standards of corporate responsibility. These events ranged from hosting safety awareness events, helping to stock local food banks, and responding to the needs of our community emergency responders.

As we continue to expand our operations, we will also maintain an active role in improving the vitality of the communities in which we already operate while at the same time focusing on new areas in which we continue to grow.

CONSOL Energy focused its charitable efforts through a "month of giving" around the holiday season in order to support those in need and those who work every day to keep our communities safe. These activities included:

# CONSOL ENERGY / CORNER CUPBOARD FOOD BANK HOLIDAY FOOD DRIVE

On December 1, 2016, CONSOL Energy employees volunteered their time and the Company contributed \$5,000 to the Corner Cupboard Food Bank to support its annual Holiday Food Drive. Employees greeted donors and accepted donations throughout the day on the steps of the Greene County Courthouse. CONSOL Energy's contribution allowed the Corner Cupboard Food bank to purchase needed food to fulfill orders for its 11 food distribution pantries for an entire month, providing food security for an estimated 2,000 people during a time of the year when the food bank sees increased demand.

# DOMESTIC VIOLENCE ROUNDTABLE WITH LOCAL LAW ENFORCEMENT AGENCIES

On December 7, 2016, CONSOL Energy hosted a domestic violence roundtable discussion with Domestic Violence Services of Southwestern Pennsylvania and several local police chiefs after a local police officer was killed in the line of duty while responding to a domestic violence incident. The discussion included unique challenges local law enforcement officers encounter when responding to domestic violence incidents, and new tools and resources available, including training and orientation to help identify and respond to domestic violence incidents.

At the event, CONSOL Energy presented Domestic Violence Services of Southwestern Pennsylvania, which provides services to individuals and their children who are abused or threatened with abuse or domestic violence, with a \$5,000 donation to support their mission and provide vital services.

CONSOL Energy also contributed \$2,500 each to the Officer Scott Bashioum Children's Memorial Fund, the Canonsburg Borough Police Department, North Strabane Township Police Department, and Cecil Township Police Department.

# UPMC HILLMAN CANCER INSTITUTE

CONSOL Energy's Month of Giving concluded with the presentation of a \$50,000 donation to the UPMC Hillman Cancer Center, continuing the Company's long-standing partnership with the region's premiere cancer research and treatment facility. The funds are used to support the CONSOL Energy Caring Cart which provides necessary comfort items to children and families battling cancer at the Children's Hospital of Pittsburgh of UPMC.

## VIRGINIA OPERATIONS GIVING

In 2016, CONSOL Energy continued to work with first responders through sponsorship of pipeline safety awareness events and through a hands-on fire training school CONSOL Energy hosted in partnership with the Richlands Volunteer Fire Department in Richlands, Virginia. Fifteen volunteer firefighters from six volunteer fire departments in two counties in Virginia participated in the gas firefighting training session. Previously, CONSOL Energy worked with the Richlands department and the Town of Richlands to outfit the training facility with a pump jack, pipeline section, and propane tank to assist in simulating real-world gas fires to enable the hands-on training firefighters would need if they encountered a gas fire in the field.

CONSOL Energy also continued to support a variety of community organizations and endeavors in Virginia including local food pantries, the arts, Little League, and local chapters of the Rocky Mountain Elk Foundation and the National Wild Turkey Federation.

# **CONTRIBUTIONS POLICY**

Public policy decisions at the local, state, and federal levels can affect the long-term success of CONSOL Energy and its subsidiaries. CONSOL Energy believes it has a responsibility to participate in the public policy process in order to protect and enhance the Company's interests and create value for its shareholders. To ensure that the Company's contributions comply with all applicable laws and reflect its corporate values, CONSOL Energy sets forth this Contributions Policy ("Policy") to provide corporate governance, control, oversight, and procedural guidance. All contributions must be legally permissible, supportive of, and consistent with the Company's business strategy, goals, and priorities; and made in full accordance with CONSOL Energy's commitment to act with integrity in all of its activities.

The Board of Directors (the "Board") is responsible for monitoring the compliance of CONSOL Energy and its Political Action Committee (PAC) with this Policy. An annual report of CONSOL Energy's contributions is submitted to the Board for review.

## **CORPORATE POLITICAL CONTRIBUTIONS**

Where permitted by law and when consistent with this Policy, CONSOL Energy and its subsidiaries may use corporate funds to contribute to state or local candidates and committees, entities organized pursuant to Section 527 of the Internal Revenue Code, and to other federal political committees where permitted. Contributions from corporations to federal candidate committees and certain other federal political committees are prohibited by law. In certain states, CONSOL Energy and its subsidiaries are permitted to make corporate political contributions to state-level candidates or committees. CONSOL Energy and its subsidiaries may make state-level corporate political contributions where permitted by law, in compliance with state contribution limits and registration/reporting requirements where applicable.

All corporate political contributions made by CONSOL Energy must be approved in advance by the Vice President for Government Affairs and the General Counsel.

## **CONSOL ENERGY PAC CONTRIBUTIONS**

CONSOL Energy sponsors a federal PAC that is funded solely by voluntary employee contributions. "CONSOL Energy Inc. PAC" is a federally registered PAC that may make contributions in connection with federal elections, subject to contribution limits defined by the Federal Election Campaign Act. The PAC may also make state-level political contributions, in compliance with state contribution limitations, registration, and reporting requirements where applicable.

All CONSOL Energy Inc. PAC contributions must be approved by the PAC Board of Directors. Detailed information on the PAC's contributions to candidates' campaigns and other political committees is publicly disclosed in the PAC's regular reports to the Federal Election Commission ("FEC"). Disbursements from the PAC to state-level candidates and committees are also reported on these FEC filings. All of the PAC's filings with the FEC are available for public review on the FEC's website at www.fec.gov.

# **EXTERNAL COMMUNITY**

## **TRADE ASSOCIATIONS**

For each trade association to which CONSOL Energy makes expenditures in excess of \$100,000 in a calendar year, the Office of the General Counsel will request that the trade association inform CONSOL Energy of the portion of expenditures made that would not be deductible under Section 162(e) (1) (B) of the Internal Revenue Code. CONSOL Energy will, in its annual Corporate Responsibility report, report the total non-deductible amount of its expenditures pursuant to Section 162(e) (1) (B) as provided in response to the General Counsel's requests. Based on its inquiry of major trade associations in which it participated at a qualifying level, CONSOL Energy can report that none engaged in activity covered by Section 162(e) (1) (B) using funds provided by CONSOL Energy in 2016.

## **ECONOMIC CONTRIBUTION**

Our operations have been centered in the Appalachian region throughout the Company's history. Our deep local roots have continually supported direct and indirect economic growth, through creation of employment opportunities for our employees and service partners. In 2016, our direct economic contribution of \$184 million stemmed from employee wages and benefits and taxes paid to federal, state, and local governments.

Our commitment to supporting local economic growth extends to our supply chain. Over 87% of our service providers' employees live and work in the CONSOL Energy operational areas of Ohio, Pennsylvania, and West Virginia. Furthermore, in 2016, approximately half of our Pennsylvania contractors were sourced from local small and diverse businesses (SDBs).

STATE	PAYROLL (MILLIONS \$)	BENEFITS (MILLIONS \$)	TAXES PAID* (MILLIONS \$)	TOTAL (MILLIONS \$)
Pennsylvania	67	17	10	94
West Virginia	22	6	19	47
Virginia	26	7	6	39
Kentucky	6	2	0.5	8.5
Ohio	2	1	2	5
Other	8	2	(19.5)	(9.5)
Total	131	35	18	184

\*Includes, as appropriate, payroll taxes, state, and local taxes, sales and use taxes, license and franchise taxes, severance taxes, state and federal reclamation taxes, black lung taxes, gross receipts taxes and other excise taxes



#### PITTSBURGH BUSINESS TIMES – WOMEN IN ENERGY LEADERSHIP AWARDS

Katharine Fredriksen (Senior Vice President, Health, Safety, Environmental Affairs, and Diversified Business Units) and Andrea Passman (Vice President of Development) were recognized for their oil & gas industry leadership in the Pittsburgh region.

# VIRGINIA DMME – VOGA OPERATOR OF THE YEAR

CONSOL Energy was recognized as the Operator of the Year during the Virginia Department of Mines, Minerals and Energy-Virginia Oil and Gas Association annual awards program.

In addition to the Operator of the Year designation, CONSOL Energy's Virginia Gas Operations were also recognized with awards for Development and Innovation, Community Outreach, and for its partnership with Matney Construction, a Virginia contractor. This is the second year the Company has been named the recipient of the Development and Innovation award.

# VIRGINIA COAL AND ENERGY ALLIANCE – BEST COMPLETED FILL

CONSOL Energy's Legacy Operations Group received recognition for the Best Completed Fill at Island Creek Coal Company's VP6 closed mine operation. The award acknowledges excellence in construction, reclamation, and revegetation.

## VIRGINIA DMME-DGO COOPERATION AWARD

Donna Hellas (Operations Analyst) was presented with a Certificate of Recognition from the Virginia Department of Mines, Minerals and Energy (DMME). Donna received the award for her cooperation and assistance on a DMME identified special project.

# **SUMMARY TABLE**

Indicator	2016
Safety	
Workforce Fatalities (contractor & employee)	0
E&P – Employee Total Recordable Incident Rate	0
E&P – Contractor Total Recordable Incident Rate	1.02
CONE – Employee Total Recordable Incident Rate	0
CONE – Contractor Total Recordable Incident Rate	4.01
DBU – Employee Total Recordable Incident Rate	0
DBU – Contractor Total Recordable Incident Rate	0
Spills ≥ 1 BBL Off Containment	3
E&P Activity Related Spills	
E&P Spills ≥ 100 Barrels Off Containment	1
E&P Spills ≥ 1 Barrel Off Containment	43
E&P Produced Oil Spills ≥ 1 Barrel Off Containment	2
E&P Total Volume Released ≥ 1 Barrel Off Containment (gals.)	20,835
CONE Activity Related Spills	
CONE Spills ≥ 100 Barrels Off Containment	0
CONE Spills ≥ 1 Barrel Off Containment	3
CONE Produced Oil Spills ≥ 1 Barrel Off Containment	0
CONE Total Volume Released ≥ 1 Barrel Off Containment (gals.)	708
DBU Activity Related Spills	
CONVEY Spills ≥ 100 Barrels Off Containment	0
CONVEY Spills ≥ 1 Barrel Off Containment	6
CONVEY Produced Oil Spills ≥ 1 Barrel Off Containment	0
CONVEY Total Volume Released ≥ 1 Barrel Off Containment (gals.)	3,788
Notices of Violation	
E&P Notices of Violation	41
CONE Notices of Violation	4
DBU Notices of Violation	13
Environmental Related Penalty Payments	¢0.47.450
E&P Penalty Payments*	\$246,450

CONE Penalty Payments\*\*\$87,000DBU Penalty Payments\*\$1,156

\*\*Includes payments made for violations in 2016 and previous years.

Indicator	2016
Land	
Total Bonds and Letters of Credit	\$16,615,122
Total Bonds Released in 2016	\$4,147,624
Acreage Released from Bond	654.94

Water	(Thousands of gallons)
Surface Water Withdrawn	163,655
Groundwater Withdrawn	0
Municipal Water Withdrawn	53,111
Total Withdrawn	216,716
Water Reused or Recycled	138,742
Water Reused by a Third Party	21,992
Total Water Reused as a Percentage of Water Withdrawn	64%

GHG Emissions	(Thousands metric tons CO2 (eq)
Scope 1	1235.83
Scope 2	599.02
Scope 3	20150.52
Total GHG	21985.37
Total Direct GHG Emissions	654.94
(metric tons CO2 eq./\$100,000 E&P Revenue)	119.65

Criteria Pollutants	E&P (Short Tons)	CONE (Short Tons)	Total (Short Tons)
Carbon Monoxide	1123.19	36.34	1159.53
Nitrogen Oxides	1404.26	160.10	1561.36
VOCs	271.89	228.79	500.68
PM 10	26.96	13.29	40.25
PM 2.5	26.73	13.31	40.04
SO2	1.23	0.77	2.00

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# **SUMMARY TABLE**

Employees	E&P	CONE	DBU
Full-time Male	319	93	77
Full-time Female	140	8	11
Full-time Total	459	101	88
Part-time Male	1	0	0
Part-time Female	7	0	1
Part-time Total	8	0	1
Union	0	0	0
By Location			
Pennsylvania Male	193	65	25
Pennsylvania Female	114	4	7
West Virginia Male	58	28	6
West Virginia Female	23	4	1
Ohio Male	8	0	4
Ohio Female	1	0	0
Virginia Male	60	0	3
Virginia Female	9	0	0
Maryland Male	0	0	37
Maryland Female	0	0	4
Other Male	1	0	2
Other Female	0	0	0
New Hires Male	22	0	4
New Hires Female	15	0	0
Turnover Male	29	0	6
Turnover Male %	6.2%	0%	15%
Turnover Female	14	0	0
Turnover Female %	3%	0%	15%
Age Group			
<30	71	25	14
30-50	254	52	38
50+	142	24	37
Disabled	5	1	0
Reportable Veteran	23	9	6

# **GRI CONTENT INDEX**

This report contains Standard Disclosures from the GRI Sustainability Reporting Guidelines.

Ref	Description	
G4 -1	Statement from the most senior decision-maker of the organization (CEO).	Letter from CEO
G4 -2	Key impacts, risk, and opportunities.	About CONSOL Energy
G4 -3	Name of the company.	About the Report
G4 -4	Primary brands, products, and services.	About the Report
G4 -5	Location of the organization's headquarters.	About CONSOL Energy
G4 -6	Country of operation.	About the Report
G4 -7	Nature of ownership and legal form.	Corp. Gov.
G4 -8	Markets served.	About the Report
G4 -9	Scale of the organization.	About CONSOL Energy
G4 -10	Employee demographics.	Internal Community
G4 -11	Percentage of employees covered under collective bargaining agreements.	Internal Community
G4 -12	Describe the organization's supply chain.	HSE
G4 -13	Significant changes during the reporting period.	About CONSOL Energy
G4 -15	Externally developed economic, environmental, and social principles to which the organization subscribes.	E&P
G4 -16	Association memberships.	External Community
G4 -17	All entities included in the organization's consolidated financial reports and whether they are covered in the report.	About the Report
G4 -18	Process for defining report content.	About the Report
G4 -19	List of material aspects.	About the Report
G4 -20	Internal aspect boundaries.	About the Report
G4 -21	External aspect boundaries.	About the Report
G4 -22	Restatements of information provided in previous reports.	HSE
G4 -23	Significant changes from previous reporting periods in scope and aspect boundaries.	None
G4 -24	List of stakeholder groups engaged by the company.	External Community
G4 -25	Basis for stakeholder identification and engagement.	External Community/About the Report
G4 -26	Approach to stakeholder engagement.	External Community
G4 -27	Key topics addressed through stakeholder engagement.	External Community
G4 -28	Reporting period.	Calendar year 2016
G4 -29	Date of most recent previous report.	May 2015
G4 -30	Reporting cycle.	Annual
G4 -31	Contact point.	Contact Details

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# **GRI CONTENT INDEX**

Ref	Description	
G4 -32	GRI content index, in-accordance level, and external assurance.	GRI Index
G4 -33	Assurance process.	About the Report
G4 -34	Governance structure.	Corp. Gov.
G4 -38	Composition of the highest governance body.	Corp. Gov.
G4 -39	Whether the Chairman of the highest governance body is also an officer.	Corp. Gov.
G4 -40	Selection process for the highest governance body.	Proxy
G4 -41	Processes for the highest governance body to ensure conflicts of interest are avoided and managed.	Related Party Policy
G4 -45	Highest governance body's role in economic, environmental, and social impacts, opportunities, and risks.	Proxy
G4-46	Highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental, and social topics.	Proxy
G4 -47	Frequency of highest governance body's review of economic, environmental, and social impacts, risks, and opportunities.	HSE Committee Charter
G4-48	Highest committee that formally reviews and approves the organization's sustainability report.	About the Report
G4-49	Report the process for communicating critical concerns to the highest governance body.	Proxy
G4 -51	Remuneration policies for highest governance body and executive officers.	Proxy
G4 -52	Process for determining remuneration.	Proxy
G4 -53	Stakeholders' views on remuneration.	Proxy
G4 -56	Organization's values, principles, standards, and norms of behavior such as codes of conduct or codes of ethics.	Corp. Gov.
G4 -58	Whistleblower mechanisms.	Corp. Gov.
G4 –DMA	Economic Performance	About CONSOL Energy
G4 –EC1	Direct economic value generated and distributed.	About CONSOL Energy
G4-OG1	Volume and type of estimated proved reserves and production.	Gas Operations
G4 –DMA	Water	CONVEY
G4 –EN8	Total water withdrawal by source.	CONVEY
G4 –EN10	Percentage and total volume of water recycled and reused.	CONVEY
G4 –DMA	Emissions	HSE
G4 –EN15	GHG Scope 1 emissions.	HSE
G4 –EN16	GHG Scope 2 emissions.	HSE
G4 –EN17	GHG Scope 3 emissions.	HSE
G4 –EN18	GHG emission intensity.	HSE
G4 –EN19	Reduction of GHG emissions	HSE, Gas Operations
G4 -EN21	NOx, SOx, and other significant air emissions	HSE

Ref	Description	
G4 –DMA	Compliance	HSE
G4 –EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	HSE
G4 –EN31	Total environmental protection expenditures and investments.	HSE
G4 -DMA	Training and Education	Internal Community
G4 –DMA	Occupational Health and Safety	HSE
G4 –LA6	Rates of injury, lost days, and fatalities.	HSE
G4-DMA	Training and Education	Internal Community
G4- LA9	Average hours of training per year, per employee.	Internal Community
G4 –LA10	Programs for skills management and lifelong learning.	Internal Community
G4 -LA11	Percentage of employees receiving regular performance and career development reviews.	Internal Community
G4 – SO4	Communication and training on anti-corruption policies and procedures.	Corp. Gov.
G4 – SO6	Total value of political contributions by country and recipient.***	External Community



# **CONTACT DETAILS**

For any questions regarding our Corporate Responsibility program, this report, or its contents, please contact Jason Harding, Compliance Specialist: jasonharding@consolenergyenergy.com

# FORWARD-LOOKING STATEMENT

Our 2016 Corporate Responsibility Report includes forward-looking statements about the Company's business and the Company's future business plans, initiatives, goals, and objectives. These forward-looking statements are based on concurrently available operating, financial, and competitive information and are subject to a number of significant risks and uncertainties. When we use the words "believe," "intend," "expect," "may," "should," "anticipate," "could," "estimate," "plan," "predict," "project," or their negatives, or other similar expressions, the statements which include those words are usually forward-looking statements. When we describe a strategy that involves risks or uncertainties, we are making forward-looking statements. Actual future results may differ materially depending on a variety of factors including, but not limited to, the risks detailed in the Company's filings with the Securities and Exchange Commission, including the "Risk Factors" section of CONSOL Energy's Annual Report on Form 10-K for the fiscal year ended December 31, 2016. Any forward-looking statements in the Corporate Responsibility Report speak only as of the date of the Corporate Responsibility Report and the Company assumes no obligation to update any of these forward-looking statements.

