# **People, Equipment & Knowledge**

# **Clean Air Engineering, Inc.**

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## Industry Background

Clean Air Engineering, Inc. is a Palatine, Illinois-based engineering and consulting services company presently doing business in three related air quality markets.

- Emission Testing handled by our Engineering Services Group
- Equipment Rental and Sales handled by our Equipment Services Group
- Consulting presently handled by our Trading Company

One or more of these markets is served out of our home office and each of three regional offices: Pittsburgh, Pennsylvania; Houston, Texas; and Marseilles, France.

#### **Emission Testing**

Emission testing involves the sampling and analysis of airborne emissions from stationary sources (e.g., "smoke stacks"). These measurements are used to:

- Demonstrate compliance with all permit conditions
- Prove that measurement instrumentation or air pollution control devices are functioning properly
- Optimize process operations
- Support pollution prevention and waste minimization efforts

Virtually all major industrial and power generation facilities as well as air pollution control manufacturers, consulting engineering firms, and environmental consultants are potential clients for these services. The U.S. emission testing market is estimated at \$300 to \$400 million per year with an estimated 3% annual growth rate. Recent regulatory actions in the U.S. have most likely increased this annual growth estimate. Worldwide, the market is estimated at over \$1 billion per year with annual growth rates in some regions exceeding 10%.

#### Equipment Rental and Sales

Clean Air Engineering fills a specialized niche of the large instrument rental industry – air emissions sampling and analysis equipment. This is a niche that we created with the formation of Clean Air Instrument Rental in 1987 and we have remained the industry leader to this date. Potential clients include other emission testing companies as well as the emission testing client base listed above. The U.S. market for this niche is estimated at \$30 to \$40 million dollars per year. The rental concept (outside of cars and videos) is still relatively new to Europe and other parts of the world and we are working to increase awareness and acceptance of this idea in these markets.

#### **Consulting Services**

The scope of consulting services covered by Clean Air Engineering includes strategic environmental planning, emission minimization, compliance planning and auditing, environmental data management systems, training, and regulatory negotiation – all, of course, involving air quality issues. The U.S. market for these consulting services is estimated at \$500 to \$750 million annually. Worldwide, it is estimated at \$2 to 2.5 billion annually.

## **Company History**

Clean Air Engineering was founded in 1972 by current President William I. Walker. Originally, the company focus was to engineer, furnish and install air pollution control devices. As an additional service, the company performed emission testing on the devices it installed. Following the passage of the Clean Air Act, the demand for testing services grew rapidly. Our business focus shifted to fill this demand and eventually emission testing services dominated the company's revenue stream.

Clean Air Engineering grew to become one of the largest independently owned testing firms in the country. In an attempt to level some of the ups and downs created by changing regulatory climates, Clean Air Engineering started an asset management program, which turned into Clean Air Instrument Rental, in 1987. The equipment rental group quickly grew to dominate this market in the U.S.

Also in the early '90s Clean Air Engineering opened its European offices, now headquartered in Marseilles, France, creating another outlet for our services. This, along with our equipment manufacturing division, Clean Air Express, leading sales in key Asian and Latin markets, makes Clean Air Engineering a truly global company.

As the testing industry matured in the '80s and early '90s, it became imperative for Clean Air Engineering to elevate the company above what was becoming a commodity market. The Leadership Team decided that the future of the company depended on its ability to reinvent itself as a provider of measurably high value services. Our commitment to integrity and delivering the highest quality data required finding clients that were willing to pay for those benefits. During an industry-wide slowdown in the mid 90's Clean Air Engineering's steadfast commitment to quality and customer satisfaction enabled us to survive while many of our competitors did not. With global energy requirements on the rise and a favorable regulatory climate, both occurring in the late 90's, we are ideally situated to expand market share and diversify our services.

Since its inception, Clean Air Engineering has always offered consulting services in some form. However, during the past three years, we have decided to focus on that market as a key to growth and diversification.

Clean Air Engineering has successfully found clients who value high quality data as a key ingredient in their own decision-making processes. The next step is to gather and manage that data for those clients enabling them to use it in future decision making.

## **Current Company Structure**

As stated above, Clean Air Engineering focuses on three major markets, this shows the Clean Air Engineering group and the markets to which it caters;

- Engineering Services Emission Testing & Sample Analyses
- Equipment Services Equipment Rental and Sales
- Trading Company Air Quality Consulting

Business units have been organized around each of the markets. Engineering Services handles emission testing and related services. Equipment Services handles rental and sales of equipment. And the "Trading Company" currently handles consulting services. A brief overview of each of these business units is presented below.

#### Engineering Services

Emission testing involves the mobilization of field crews, consisting of engineers and technicians, to industrial plant sites around the country and throughout the world. Crews range in size from 1 - 25 with the average small job requiring 3 people and the average larger job using 9 or 10. Along with the manpower, scientific instrumentation is also shipped to these field locations. Emission measurement projects can last from a single day to several weeks and require significant amounts of logistical coordination for successful completion.

Our crews have experience in almost every large industry with air pollution concerns. However, we specialize and are the leaders, in the waste to energy and power generation markets (see Figure 1).



Figure 1 Engineering Services Market Breakdown

Emission measurement has accounted for \$4.7 million in revenues YTD that represents about 57% of Clean Air Engineering's total sales. At that pace 2001 Engineering Services

revenues should be about \$9.4 million, easily making Clean Air Engineering's emission measurement group one of the dominant players in this field. Emission measurement revenues are up 32.2% over the same period last year.



Figure 2 Engineering Services Revenue and Profit

#### Equipment Services

Instrumentation plays a vital role in the air quality industry. Projects often require large amounts of sophisticated and expensive equipment. This equipment, because of its field usage and calibration criteria, requires more maintenance than similar instrumentation in laboratory settings. With equipment playing such a large role in our industry, it was a shrewd business plan to capitalize on this need. Clean Air Engineering addressed its own equipment needs creating a profit center that addressed the rapidly expanding needs of the industry as a whole.

Dedicating people and resources to the instrumentation side of the business makes Clean Air Engineering unique in comparison to its competitors. In fact, most emission measurement firms rent and/or buy equipment from Clean Air Engineering. Our emphasis on quality control, our extensive inventory, and our experience and understanding of testing applications is recognized throughout the industry. Clean Air Instrument Rental is the leading air-testing rental business in the country. The group has over \$5 million of instrumentation in rental inventory and 23 full time employees. As the largest unit in Clean Air Engineering Equipment Services, Clean Air Instrument Rental has accounted for \$2.8 million in revenues (through June 2001) which represents an 18% increase over the same period last year.

Clean Air Express manufactures and sells sampling equipment and supplies to companies all over the world. Clean Air Express has accounted for \$820 thousand in revenues (through June 2001) which represents a 57.2% increase over the same period last year.



Figure 3 Equipment Services Revenue and Profit

Clean Air Engineering Europe in Marseilles, France provides rental instrumentation and equipment sales to the European, Mediterranean and Mid Eastern markets. Clean Air Engineering Europe is also experiencing a record year. Revenues YTD (through June 2001) are \$530 thousand -- 26.2% above the same period last year.

Equipment Services revenues, as a unit, are up 25.3% over the same period last year. (See Figure 3)

#### The Trading Company

The old adage that the "whole is greater than the sum of its parts" is true about Clean Air Engineering. The Trading Company was created in 1998 to look for opportunities that

encompassed all our parts. In the past, we had a decentralized sales effort -- each group marketed and sold itself. Our image became fragmented in the marketplace. Internally we worked together and supported each other for the benefit of our customers, but some of those customers were unaware of our total capabilities. With the help of centralized sales and marketing effort provided by the Trading Company, customers now see our value and understand why Clean Air Engineering is able to deliver when others cannot.

The Trading Company provides corporate sales direction to position Clean Air Engineering as a broad engineering service company focused on providing market leadership in air quality management, worldwide. The team reflects Clean Air Engineering's recognition of the importance of strategic selling to key accounts and marketing the full capabilities of Clean Air Engineering.

The talent that Clean Air Engineering dedicated to the Trading Company could have represented a major drain on our earnings capabilities had they only performed strict sales without being billable in some fashion. Thus, this group also assumed the task of developing and delivering consulting services and environmental management systems. This dual role works well because the consulting opportunities lead to work for our traditional business groups. As consulting services mature as a market they will more than likely be spun off into their own profit center.

Since the Trading Company has provided a focused effort on developing consulting services, consulting services revenue is up more than 500%. We have established high-level relationships with major energy and chemical companies providing consulting services to multiple plants. The number of these projects is on the rise and they have proven to be very profitable.

### **Market Analysis**

Clean Air Engineering is fortunate in that there are currently opportunities to expand our existing markets and also to build on that foundation to expand into new markets. We look for the right customers who understand the value of quality data.

#### Targeted Customers

Clean Air Engineering is not the lowest priced option available in our markets. It is not possible to deliver quality data consistently while trying to be the low cost option. Clean Air Engineering focuses on the value of the data we provide. If the value of the data is greater than our cost to the client then there is a better business fit. Clean Air Engineering tries to identify and work with clients who understand that principle.

To this end, we have developed a partnerability index which rates potential clients on a number of factors that would make them good matches for our business philosophy. Out of over 200 candidates we have identified 30 major corporations to target for expanded opportunities and partnerships.

#### **Expansion of Existing Markets**

The dramatic expansion and increased stringency of air quality regulations under the Clean Air Act is the main driver of our U.S. business. For the first time, facilities are required to obtain federal permits (called Title V permits) to operate emission sources. In addition, a responsible corporate official must certify continuous compliance with all permit limits. Over 32,000 facilities nation-wide are subject to these new rules.

Clean Air Engineering is well positioned to take the lead in the Title V permit revolution. For the past two years we have co-chaired with the US EPA the Air and Waste Management Association's Specialty Conference on the Title V Permit issues. Because much of the implementation of Title V requires improved data management at affected facilities, we have signed a Joint Marketing Agreement with SAIC, a \$6 billion company with extensive experience in the software side of data management systems. This partnership further enhances our capabilities with respect to the Title V market. Recent market studies indicate that the environmental data management market is currently over \$4 billion with annual growth in excess of 12%.

In addition to Title V, utility deregulation coupled with new, stringent NOx reduction requirements has resulted in a tremendous expansion of that market. With the new Bush administration energy policy and the current energy crunch, this boom will last for the foreseeable future.

Finally, the increased regulatory focus on air toxics is driving a lot of high-end business. EPA continues to issue scores of new air toxics regulations that affect industries from pharmaceuticals to pulp and paper to coal-fired utilities. With these regulations come increased testing demands that require a high-level of expertise.

These developments affect all three Clean Air Engineering business units. Engineering Services benefits from the increased testing requirements. Also, given that the bulk of Equipment Services clients are other emission measurement companies, they benefit from the same conditions that benefit Engineering Services. Finally, since many of these regulations are affecting industries that have not been affected in the past, the need for consulting services has also increased dramatically.

#### **Diversification Into New Markets**

Using today's technology, Clean Air Engineering is able to automate and remotely control and maintain existing emission monitoring systems for clients.

Clean Air Engineering is investing some of its resources in integrating our knowledge of emissions monitoring with the opportunities presented by new communication technologies. A properly equipped emission measurement system could be monitored and maintained remotely via the Internet. Using a single, centralized secure data warehouse, the data from hundreds of systems could then be managed in a much more efficient manner. In addition, the accumulation of continuous emission and operational data from hundreds of sources has the potential to create an invaluable knowledge base. Each of our clients would benefit from the information this aggregate data would provide.

This same remote monitoring and control capability will provide Clean Air Engineering with potential maintenance contracts on the systems within their control creating another new revenue stream. On board diagnostics of each system alerts the data center of system abnormalities before they become serious, allowing a service call before loss of critical data. The information provided by the aggregate data of a similar system could be used to develop predictive maintenance systems – make the repair <u>before</u> the unit fails. This would improve system up-time.

The modernization of emission monitoring is inevitable. As in many other industries, the technology of the Internet is too powerful not to exploit in managing large amounts of data. The ability to establish secure data centers designed to retrieve, summarize and store data better than site-specific locations is upon us. Clean Air Engineering is in position to lead that change.

## Leadership Team

Clean Air Engineering is a team-based company. Team-based was chosen mainly because teams operate better and attract better people than command and control organizations. Clean Air Engineering is like an Outward-Bound whitewater rafting experience, consisting of a fully equipped on-location movie crew, engineers, scientists and a handful of Mt. Everest sherpas, all on a tight schedule. Think about successfully accomplishing several of these each week, and you will understand daily life at Clean Air Engineering.

Our people are all professionals and leaders in their own right and, after training, need very little additional leadership. However, an enterprise needs direction and our leadership team is charged with setting that direction. The leadership team at Clean Air Engineering has been together a long time and internally we hardly ever use formal titles, but we understand the occasional need for them and offer the following with respect to our leaders and directors.

Name	Tenure	Position
William I. Walker	29	President, CEO & Chairman of the Board
Frank S. Kilvinger	29	Executive VP, CFO, Secretary & Director
Allen W. Kephart	11	Senior VP, Business Development & Director
James E. Wright	8	Senior VP, Engineering Services & Director
Mary P. Ryan	14	Senior VP, Instrument Rental & Director
John A. Chapman	27	Senior VP, Chief Technical Officer
Larry Golden	27	Vice President, Special Projects & Director
Scott Evans	15	Vice President, Regulatory Affairs
Steven F. Rees	25	Vice President, Marketing

All Directors are elected at the annual meeting of shareholders. Our executive officers are appointed annually by our Board of Directors and serve at its discretion.

#### Leadership Team Bios

One Vacancy

**William I. Walker** founded the company in 1972 and has served as the President, Chief Executive Officer and Chairman of the Board since that time. Bill is a Director of our dormant subsidiary, Clean Air Engineering, LTD. Bill is a member of the Air and Waste Leadership Association and American Society for Quality. He received a Bachelor of Science degree in Electrical Engineering from the University of Buffalo and is a registered engineer in the state of Illinois.

**Frank S. Kilvinger** joined the company in 1972 and has held his current position of Executive V. P. and Chief Financial Officer since September 1998. Frank has served on the Board of Directors on and off (mostly on) since 1976. Frank is also a Director of our subsidiary, Clean Air Engineering, LTD. Frank served in several positions with our company including Sr. Vice President Engineering Services, President of a merged in subsidiary Boyle Engineering Laboratories and leader of European operations. Frank received a Bachelor of Science degree in Engineering from the Milwaukee School of Engineering.

Allen W. Kephart joined the company in 1990 and is a Senior V. P. and Team Leader for our Business Development Group, which we refer to as The Clean Air Engineering Trading Company. Al has served on the Board of Directors since 1996. Al started with the company in a Technical Sales role and has previously served as the Business Leader for the Pittsburgh Office and the Business Leader for the Engineering Services Unit. Al holds a Bachelor of Science degree in Petroleum Engineering from West Virginia University.

**James E. Wright** joined the company in 1993 after working 7 years in the air quality measurement field with ETS, Inc. Jim is a Senior V. P. and the Business Leader and Technical Director of the Engineering Services Unit. Jim has been a member of the Board of Directors since 2000. Jim has previously served as Business Leader of the Pittsburgh office. Jim holds a Bachelor of Science degree in Chemical Engineering from Virginia Polytechnic Institute.

**Mary P. Ryan** joined the company in 1987 and is a Senior V.P. and the Team Leader of the Instrument Rental Division a position she has held since March 1997. Mary has served on the Board of Directors since 2000. Mary has held many technical and sales positions in her tenure at Clean Air Engineering. Mary has a Bachelor of Science degree in Chemistry from University of Illinois, Chicago.

**John Chapman** joined the company in 1974 and immediately assumed the role of "go-to guy" for most things technical. This role has since been formalized and John is currently Sr. V. P. & Chief Technical Officer. John has served in numerous technical capacities including Vice President of R&D. John has a Bachelor of Science degree in Engineering from the University of Illinois, Chicago.

**Larry Golden** joined the company in 1974 and is currently the Vice President of Special Projects. Larry is the Chairman of the Board of our subsidiary, Clean Air Engineering, Ltd. Larry has been a member of the Board of Directors since 1979. Larry started many of the operations currently run as separate business units. He started and served as the Business Leader of the Instrumentation Rental Division, researched and opened the European Offices in 1991 and created an offshoot business CAE Media in 1998. Larry has a Bachelor of Science degree in Biology from Northern Illinois University.

**Steven F. Rees** joined the company in 1976 and is a Vice President of Marketing. Steve has been active in numerous marketing and sales roles for both Equipment and Engineering Services Units including Clean Air Europe. Steve holds a Bachelor of Arts degree in Marketing & Finance from Northern Illinois University.

**Scott Evans** joined the company in 1986 and is currently Vice President of Regulatory Affairs. Scott began his career at Clean Air Engineering as Team Leader of the Technical Communications Team. He also led our external training group – CAE Seminars – during the early 1990's as well as our quality improvement program. Currently Scott is the Technical Leader for our consulting services group, which provides technical consulting on air quality compliance and permitting issues. Scott has a Bachelor of Arts degree in Education with an emphasis in Mathematics from National-Louis University.

## **Financial Data**

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-	Projected for 2001 31-Dec	Audited 2000 31-Dec	Audited 1999 31-Dec	Audited 1998 31-Dec
Gross revenue	\$16,000	\$13,490	\$11,939	\$11,625
Costs of revenue	10,000	9,169	8,635	10,493
Gross profit	6,000	4,321	3,304	1,132
Selling, general and administrative	2,500	2,046	1,752	1,395
Income from operations	3,500 500	2,274 414	1,552 430	(263) 569
Income before provision for income taxes	3,000	1,861	1,122	(832)
Provision for income taxes @ (41.3%)	1,239	768	463	(344)
Net income	1,761	1,092	659	(488)
1-yr Internal Income Growth 1-yr Internal Revenue	61%	66%	NE	
Glowul	19%	13%	5%	

Clean Air Engineering is presently structured as an 'S' Corporation. This data reflects our estimate of the taxes as if we were structured as a 'C' Corporation.

The projected revenues for year 2001 are based on our trailing 12 month results through June 30, 2001 which show a revenue growth rate of 18.5% and a bottom line growth of 55%. Pre-contract activity is excellent. Operations and finance can easily manage a 20% internal revenue growth rate.

In order to accelerate our growth and take advantage of the market opportunities we plan to raise \$25,000,000 for our new markets.

We estimate that the markets we are targeting will grow to be worth \$5 billion annually in the next 10 years.

### **Summary**

Clean Air Engineering is poised to go public and for all the right reasons. The company is positioned well within the industry, a leader or near leader in each of our key markets. The company's focus on quality and integrity has rewarded Clean Air Engineering with a very good reputation among its peers and client base. As a dominant player in a market ripe for consolidation the company's value continues to grow. While other industry sectors suffer, the environmental sector, and particularly those companies tied to the energy market, is in a growth phase which should continue for several more years.

Clean Air Engineering is not a start-up company looking for capital to fund some unproven business model. The company has a nearly 30 year track record, a stable leadership team that has stuck together through thick and thin and we are following a vision we share to lead our market in air quality management, worldwide.

The capital we raise in this public offering will fund growth areas that, without it, would be inaccessible to us within the window of opportunity. These growth areas are available to us now as a result of market timing and market understanding, and they reflect natural progressions of our core capabilities. None of this will happen without hard work and dedication, but we are used to that, we have been working on this success story for a long time.