ADVANCED ENERGY PRODUCTS

"We put the Energy Efficiency in grEEn!"

Business Plan

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EXECUTIVE SUMMARY

BUSINESS SUMMARY

Advanced Energy Products Corp. (AEP), a California corporation, is a spin-off of Davis Energy Group (DEG), a well-established 23 year old energy engineering firm. DEG develops energy saving cooling and heating systems for residential and commercial buildings with funding support from the U. S. Department of Energy, utilities, and the California Energy Commission. Three proprietary products developed by DEG are ready for commercialization by AEP now.

AEP was organized to commercialize grEEn™ heating, ventilation and air conditioning (HVAC) equipment developed by DEG and others. Production will be outsourced to firms with excess capacity in existing facilities. AEP will be the industry leader in environmental and energy efficient HVAC equipment. **AEP products will slash residential and commercial user's air conditioning costs by 30-90%.**

PROPRIETARY PRODUCTS

NightBreeze – A line of residential ventilation cooling and heating systems that enhance indoor air quality and can cut peak cooling energy demand as much as 60%.
OASys – An advanced two-stage residential evaporative cooler that cuts cooling energy use by 90%.
HyPak – A commercial rooftop unit (RTU) that cuts cooling energy use up to 50%.

As shown below, over $4.5 million has been invested through DEG in the development of the initial products lines. Additional funding of $2.2 million is under contract or awarded for these three product lines. DEG also has contracts and awards for $1.4 million to develop other product lines.

Product Development Investments in AEP Products

	Years	DOE/CEC	DEG(1)	Other(2)	Total
NightBreeze at 7/30/04	1994-04	873,247	227,946	508,554	$1,609,747
OASys at 7/30/04	1990-04	675,735	645,944	170,000	$1,491,679
HyPak at 6/30/04	2000-04	1,057,098	530,952	35,000	$1,618,050
Totals		**$2,606,080**	**$1,404,842**	**$713,554**	**$4,724,476**

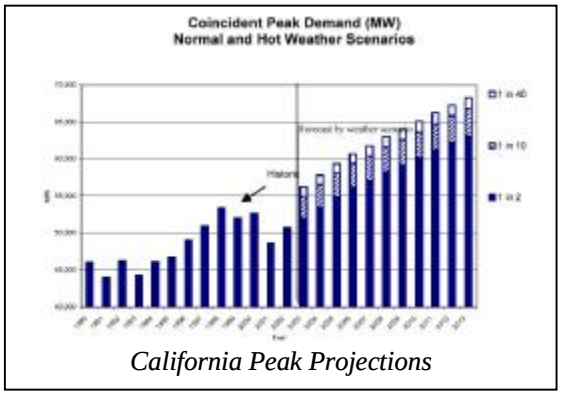
In addition, AEP will market other complimentary energy saving products currently selling well in northern California but not actively marketed elsewhere.

MARKET

The domestic market for residential and light commercial HVAC equipment exceeds $10 billion annually. Energy costs are rising in general and over the next five years, electric rate structures will increasingly move to real time and time-of-use pricing. These rate increases will dramatically increase the cost to cool homes and buildings, as peak cooling demand coincides with peak power use. In addition, building codes are requiring more ventilation to maintain adequate indoor air quality. These trends will increase demand for AEP's highly efficient, proprietary products, underpinning rapid growth and the Company's attractiveness for ultimate sale.

Market Drivers

- Air conditioning is 32% of peak electricity demand in California
- A 15%–21% increase is predicted in office building peak cooling
- More utilities are charging penalty prices for peak usage
- HVAC equipment accounts for 48% of building energy use
- Government and utilities offer incentives for more efficient units to reduce peak demand
- Government standards increasing ventilation are market drivers



California Peak Projections

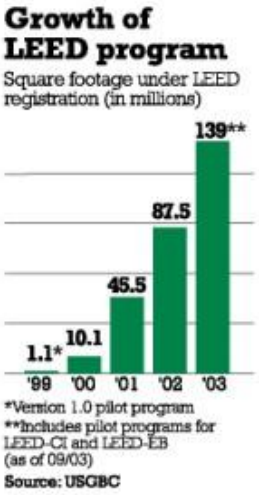
Market Needs

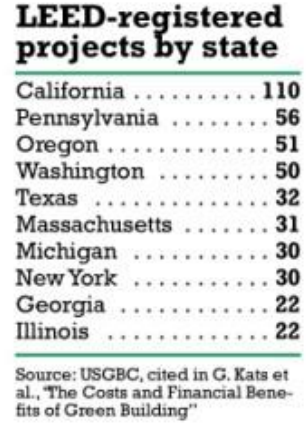
Government

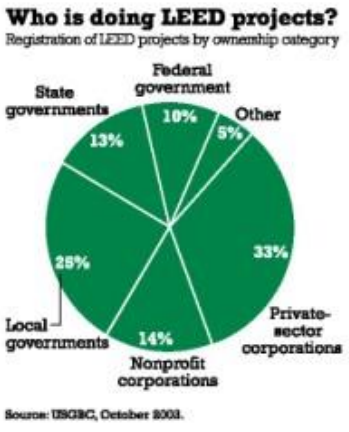
On July 27, 2004, Governor Schwarzenegger signed Executive Order S-12-04 requiring all state agencies to reduce energy use during the peak summer season. At the federal level, all facilities are under executive order to reduce energy consumption by 30% this decade.

Green Buildings Movement

An estimated $15 billion worth of green buildings is currently in design or under construction in the U.S., representing 12-15% of total public construction and about 2% of private-sector construction. Although that $15 billion represents less than 5% of the total $315 billion U.S. annual construction for commercial, industrial, and institutional buildings, the category is growing at the rate of about 75% a year. This is evidenced by the growth in participation in the Leadership in Energy and Environmental Design (LEED) green building rating system. LEED was developed and is sponsored by the U. S. Green Building Council, the preeminent sustainable building industry association with over 5,000 members. **To get a LEED rating, a building must have an energy efficient HVAC system.**







COMPETITION

Unlike the competition, AEP will approach the market as a Green Energy company first, and a provider of cooling and heating equipment second. Hence AEP's tagline: *"We put the Energy Efficiency in grEEn."*

Approximately one-third of the domestic HVAC market is served by the four largest producers, as shown below. The remainder of the market is served by a multitude of entities.

Company	Market Share
Carrier (United Technologies)	15%
Lennox International	8%
Trane (American Standard)	7%
York International	4%

AEP Competitive Advantage

While other HVAC companies sell on price, and also offer a line of energy efficient equipment, AEP will exclusively market and distribute "grEEn" HVAC equipment. Advantages of our products include:

- Provide cooling while cutting energy use up to 90% (Short Paybacks)
- Reduce peak power demand
- Operate at twice the efficiency of conventional HVAC units
- Maximize utility and government rebates and incentives
- Provide superior comfort and lower operating costs
- Easy installation and maintenance
- Surpass new ventilation standards

MARKETING AND SALES STRATEGY

AEP's basic marketing approach will be to sell residential products to homebuilders and their HVAC contractors, and to sell commercial products to building owners and managers, developers and their contractors. For commercial products, AEP will also target energy service companies. Once key builders and contractors are sold on AEP's products, AEP will establish relationships with distributors. This strategy will maximize AEP's margin and also recognizes that distributors are often slow to sell new technologies, disruptive products, products that require special explanation, or those having a long selling cycle.

MANAGEMENT

AEP management is seasoned in the HVAC energy efficiency industry. The Company is led by an accomplished entrepreneur with a successful track record in business start-ups, operations and HVAC product development.

Mark Berman, President and Chairman of the Board

Mr. Berman, as a Principal at DEG, oversees business and product development. Mr. Berman is a successful entrepreneur with start-up and exit experience. He has a MBA from Indiana University and a BS in industrial engineering from Rutgers University, and over 20 years experience in the energy and energy efficiency industries.

David Springer – Board of Directors and Shareholder

Mr. Springer, founding Principal and President of DEG, is leading one of the four National Renewable Energy Laboratory Zero Energy Home program teams. He is an ASHRAE member and currently serves on the ASHRAE Radiant Panel Heating Board. Mr. Springer has 25 years of experience in energy efficiency and related areas.

Richard Bourne – Board of Directors and Shareholder

Mr. Bourne, Principal and founding President of DEG from 1981 through 1997, specializes in the design, development, and performance of energy efficient projects and components for buildings at DEG. Mr. Bourne has 35 years of experience and holds 16 patents in energy efficiency and related areas.

ADVISORY BOARD

Bruce Ritchey, President & CEO, WaterFurnace International

Formely V.P. of Sales at Trane and York, Mr. Ritchey now heads a $50 million per year public company that designs, assembles and markets high quality HVAC equipment.

Rick Wylie, President, Beutler Corporation

Mr. Wylie leads the second largest HVAC contractor in the country, with yearly sales exceeding $130 million. Beutler installs HVAC equipment for all major (and most minor) home builders in Northern and Central California, and is known for innovation.

Lynn Simon, President, Simon & Associates

Ms. Simon heads a green building consulting firm addressing environmental and healthy building practices. She was on the Board of Directors and Executive Committee for the U.S. Green Building Council from 1998 to 2003 and is a licensed Architect in California.

FINANCIAL SUMMARY

Revenues were modeled based on three major product lines serving both residential and commercial markets. Projected revenues were built based on unit volume for each applicable climate and region.

Projections	YR1	YR2	YR3	YR4	YR5
Revenue	$1,135,500	$6,067,700	$20,575,650	$58,044,700	$122,769,500
EBITDA	- $901,338	- $438,380	$3,493,897	$9,367,445	$25,419,561
Cap Ex & Other	$2,250,000	$950,000	$1,950,000	$0	$0

USE OF FUNDS

The company is currently seeking a $6.5 million investment. $3 million of this capital will be used to build a strong sales and marketing team and for working capital. The remaining $3.5 million will be used for tooling for contract manufacturers and continued product development.

EXIT STRATEGY

AEP's management is flexible on exit strategy. Management's intent is to aggressively grow the business, develop its product map, and conduct itself in accordance with public company requirements to position the Company for acquisition in Year 5. Management is open to an exit acquisition of the entire Company or asset sales of product lines. Target buyers are other HVAC and Green Energy companies. Alternatively, the company could complete an initial public offering.

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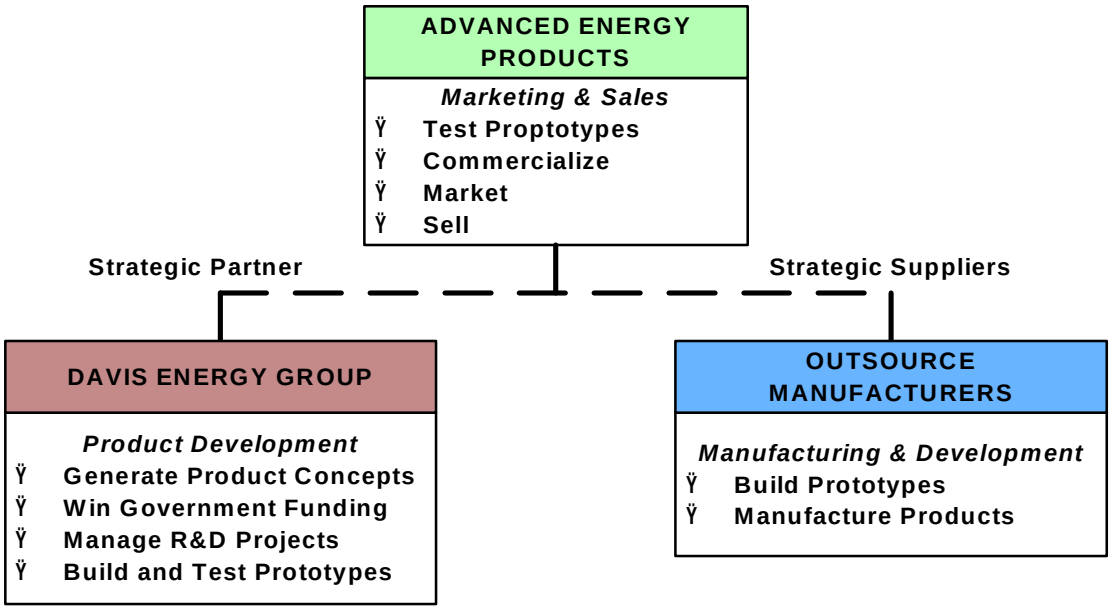
GLOSSARY

TERM	DEFINITION
AC	**Air Conditioning**
AEP	**Advanced Energy Products**
BAP	**DOE's Building America Program**
CHP	**Combined Heat and Power - system that generates electricity and uses the waste heat to provide heating and sometimes cooling**
DEG	**Davis Energy Group**
DOE	**Department of Energy**
EER	**Energy Efficiency Ratio – for commercial AC systems**
grEEn	**Energy Efficient and green**
Green Building	**Process to create buildings and supporting infrastructure that minimize the use of resources, reduce harmful effects on the environment, and create healthier environments for people**
HVAC	**Heating, Ventilation and Air Conditioning**
kW	**Kilowatt**
kWh	**Kilowatt-hour**
LEED	**Leadership in Energy and Environmental Design green building rating system**
Peak Demand	**The maximum demand for power experienced by a utility during a year**
PG&E	**Pacific Gas & Electric Company**
Real Time Pricing (RTP)	**Electrical energy pricing that varies every 15 to 60 minutes based on real time demand and availability of power**
RTU	**Rooftop Unit – commercial cooling and heating systems designed to be located on roof tops**
SEER	**Seasonal Energy Efficiency Ratio – for residential heating and AC systems**
SMUD	**Sacramento Municipal Utility District**
Time-of-use Pricing (TOU)	**Electrical energy pricing that varies according to a set schedule**
USGBC	**United States Green Building Council**
ZEH	**DOE's Zero Energy Homes Program**

THE BUSINESS AND INDUSTRY

Advanced Energy Products Corp. (AEP) is a California corporation located at 123 C Street, Davis, CA, 95616. Mark Berman, President. AEP is organized to commercialize, market, and sell low energy cooling and heating products developed by its strategic partner Davis Energy Group (DEG). AEP will also market advanced energy efficiency products developed by other firms that lack a strong market presence in this space. AEP is positioning itself as the preeminent environmental HVAC equipment supplier and the industry leader in energy efficient grEEn™ HVAC equipment.

AEP was spun out of Davis Energy Group to commercialize products developed by DEG in partnership with government entities and other private sector companies. One residential HVAC product is entering the marketplace immediately and four more products will be launched over the next 12 months in both the commercial and residential HVAC sectors. These "disruptive" technologies will enhance comfort and generate savings between 30% and 90% of air conditioning electricity costs for the end-user. It is particularly valuable to both the utility and the user that the majority of these savings occur during "on peak" hours.



The residential and commercial markets are primed for new cooling and heating equipment with energy saving attributes. There has been a dramatic push in recent years toward "green" buildings designed in an environmentally responsible manner. Energy efficient HVAC systems are a key component of green buildings. At the same time energy costs are rising. Consequently, the government, utility and private sector are focusing on energy efficiency for both economic and environmental benefits. Utilities have initiated many programs to promote on reductions in electricity usage, including surcharges set aside to promote these efforts. These funds have been used for rebates on new products, public awareness, and other programs to reduce energy consumption and peak demand. Improved HVAC systems are of particular interest to utilities

because of the cost of building capacity to meet peak summer electricity usage. Utilities are moving to increase electricity rates during peak periods.

AEP is poised to take advantage of these market realities. The company is positioning itself as a provider of grEEn™ "Energy Efficient" technologies to market its products through partnerships with both utilities and established companies within the HVAC marketplace. The trademark slogan taking the company into the marketplace is: *"AEP puts the Energy Efficiency in grEEn."* AEP products have unique attributes and will be sold in the marketplace in a variety of ways. Examples of these varied approaches include utility sponsorship, partnering with established market leaders, renaming products for resale, and direct sales.

- **Disruptive Products**
- **Reduce A/C Costs 30% to 90%**
- **Reduce Critical Peak Energy Demand**
- **Green Technology**
- **Huge Market Potential**

Management is seasoned in the field of energy efficiency and the HVAC industry. AEP is being led by an accomplished entrepreneur with a successful track record in business start-ups, operations and HVAC product development. Marketing executives with the market experience and contacts have been identified and production will be outsourced to firms with excess capacity in existing facilities.

AEP is now looking for equity partners to help accelerate the Company's growth. Strategic partnerships are being negotiated for full product launches and commercialization of several products has begun.

- **Experienced Management**
- **Right Products**
- **Right Time**

MANAGEMENT

EXECUTIVES

Mark J. Berman, President, Founder and Board of Directors member

Mr. Berman is presently a Principal at Davis Energy Group, where he oversees business development and manages some of the firm's larger projects, including the development of NightBreeze and HyPak. Other projects he has managed include: development of a combined refrigerator electric water heater for the California Energy Commission (CEC), an assessment of residential construction quality for the CEC, and a program promoting residential water cooled condensers for Pacific Gas & Electric Company. Prior to joining DEG, Mr. Berman consulted on energy matters for a variety of clients, including a study of Sacramento Valley natural gas supply for the Sacramento Municipal Utility District and the acquisition of a 30 Megawatt cogeneration power plant. He also co-founded and ran an oil and gas exploration company in West Texas, attracted investors and took the company to a successful sale of its assets. Mr. Berman earned a Masters of Business Administration at Indiana University and a Bachelor of Science in industrial engineering from Rutgers University.

Marketing and Sales Director

(Search underway)
Marketing, sales, distribution, product managers, and customer service

Manufacturing Director

(Search underway)
Outside Manufacturing, subcontracting, purchasing, quality control and field training

Accounting Manager

TBN

Mary Westcot, Manager, Administration and Human Resources

Responsible for personnel, office management, computers/network, and support. Mary Westcot has been part of the Davis Energy Group administrative team since April of 2003. Her current responsibilities include proposal and report preparation, research, meeting planning and a variety of other administrative duties, including start-up administration for AEP. During her more than 25 years of office management and supervision, Ms. Westcot has evolved administrative services for multiple companies from start-up to realization. Among her range of administrative skills are accounting, budget and finance, human resources, policies and procedures, insurance, health and safety, meeting planning, supervision and efficiency of operations. Ms. Westcot has a business degree and a certificate in Human Resource Management from Sacramento State University.

BOARD OF DIRECTORS

David Springer, Founder and Shareholder

Mr. Springer is a founding Principal and is currently President of Davis Energy Group. At DEG, he manages operations, and participates in mechanical design, technology development, market transformation, standards development and other projects. He is currently leading DEG's role as one of the four National Renewable Energy Laboratory Zero Energy Home program teams. He is an ASHRAE member and serves on the board of the Radiant Panel Association. In the late

1980's Mr. Springer worked in the California Energy Commission's Solar Office, where he managed state building retrofit projects, and provided support for the development of the energy standards. Prior to that, he entered the energy field as a designer of solar heating systems and formed Natural Heating Systems, the Sacramento Valley's first specialty solar contracting firm. Mr. Springer is a 1973 graduate of the University of California at Davis.

Richard ("Dick") Bourne, Founder and Shareholder

Dick Bourne is a Principal at Davis Energy Group and was founding President of DEG from 1981 through 1997. He specializes in the design, development, and performance prediction of energy efficient projects and components for buildings. A former Associate Professor at the University of Nebraska, he has presented more than 150 special lectures, workshops, and technical papers on energy subjects since 1974. He served as Chairman of ASHRAE's radiant heating/cooling technical committee, and holds 16 U.S. patents.

Mr. Bourne leads the DEG design team in the development of emerging energy-efficiency technologies. Recent product development projects include the DualCool system for packaged rooftop cooling units; the IDEC advanced two-stage evaporative cooler; the HyPak hydronic rooftop cooling unit; the NightSky night-radiative cooling system; and the SunCache low-cost solar water heating system. He has been a registered professional engineer in California since 1977. His educational background includes a BA degree from Amherst College, a BSME from West Virginia University, and an MSME from Stanford.

Earl Goldstein

Mr. Goldstein has been involved in the real estate industry since 1971. In 1973 he moved to Honolulu, HI as V.P. of Marketing (Residential) for the Robert Grant Co. In 1975 he started his own consulting business for the marketing of residential and condominium properties. He formed a real estate partnership in Waikiki specializing in residential and commercial property sales and in 1985 he established Earl Goldstein & Co., specializing in commercial real estate sales and investments, condominium conversions and consulting. Additionally, he formed Exotic Motorcars, which leased high end sportscars from its own showroom and repair facility.

In 1989 Mr. Goldstein moved to Granite Bay, CA to focus on commercial real estate investments in California. Through partnership syndications he acquired 13 projects including office buildings, shopping centers and industrial buildings. Mr. Goldstein has won many awards in his career and has been published in various real estate media. Additionally, he serves on the board of the Jewish Family Service of Sacramento. He graduated from the University of Illinois with a business/marketing degree.

William ("Bill") Bernheim

Mr. Bernheim began his career as an intellectual property attorney dealing with patents, licenses and trademarks. In 1978 he began four years with the U.S. Department of Energy before entering private law practice. Mr. Bernheim practices in state and federal courts throughout California, before the U.S. Patent & Trademark Office, Federal Trade Commission, U.S. Bankruptcy Courts and U.S. District Courts as well as the California and U.S. Supreme Courts.

Mr. Bernheim is a longtime Rotarian and an avid bicyclist touring both nationally and internationally. He has served as a director on the board of the local Chamber of Commerce and Museum. He attended college at the University of California at Davis graduating with a degree in Chemical Engineering. He received his Juris Doctorate degree from the U.C. Davis Law School and was admitted to practice in California in 1973.

ADVISORY BOARD

Bruce Ritchey, WaterFurnace International

President and CEO of WFI Industries Ltd., a publicly traded company on the Toronto Stock Exchange under the symbol WFI. WaterFurnace is a strategic ally of AEP and will assist with the launch of NightBreeze. WFI Industries Ltd. is the parent company of WaterFurnace International and LoopMaster International. Prior to WFI Industries, Bruce was Vice President of Sales for The Trane Company, a $3 billion manufacturer of heating and air conditioning equipment. He also worked for York International and was Vice President of Distributon and National Account Operations for the $1 billion Unitary Air Conditioning Group.

In his previous assignments Mr. Ritchey developed a reputation as a turnaround specialist. He had taken three previous sales and distribution operations from worst to first in terms of market share and profitability. Mr. Ritchey joined WaterFurnace in November of 1998. At the time the company was struggling. They had an operating loss of $1 million for the year; and the stock had fallen from $1.50 Canadian to $.74 in the previous 12 months. Over the past five years the company has rebounded and boasts the best operating ratios in its industry. Today WaterFurnace stock sells in the range of $8.40 Canadian; and has been one of the best performing stocks on the Toronto Stock Exchange over the past three years.

Mr. Ritchey is an active member of the Air Conditioning and Refrigeration Institute, the International Ground Source Heat Pump Association and Vice Chairman of the Geothermal Heat Pump Consortium.

Rick Wyile, Beutler Corporation

President and co-owner of Beutler Heating and Air Conditioning Corporation, the largest residential air conditioning and heating company in the state of California. Beutler is a strategic partner of AEP and manufactures the Smart Vent and Zone Thermal Equalizer products. Beulter has revenues of $135 Million and over 2,000 employees. Beutler was founded in 1947 and is headquartered in Sacramento, California. The company has recently begun to acquire competitive and compatible companies.

Mr. Wylie joined Beutler Corporation as a warehouse employee in 1976 and worked his way up through the company. He studied the technical side of HVAC through training classes, learned on the job, and has taken university classes to enhance his management skills. Beutler has a long history of having an innovative philosophy and an inventor mentality. Mr. Wylie holds six patents for products he invented at Beutler Corporation.

Lynn Simon, Simon & Associates

Established in 1994, Simon & Associates (S&A) is a green building consulting firm addressing environmental and healthy building practices. Ms.Simon is its President. The firm's

services include: facilitating design team charettes to develop goals and implement strategies for sustainable building projects; researching and evaluating green, energy efficient building materials and products; using LEED™ as a design tool; and educating and training design professionals, government agency staff, and others on sustainable building issues. Ms. Simon is the wife of Mark Berman. Ms. Simon was on the Board of Directors and Executive Committee for the U.S. Green Building Council from 1998 to 2003. She is a licensed Architect in the state of California and has her Bachelor of Arts in Architecture from U.C. Berkeley and a Master of Architecture from the University of Washington.

MARKET

THE HVAC MARKET

The U.S. market for heating, ventilation, and air conditioning equipment approached $10 billion (wholesale) in 2003. **This large market subdivides into segments for new and retrofit, residential and non-residential.** While some major players participate in all categories, paths to market vary significantly by category. AEP's initial entries will be in the residential new construction sector. This will be followed by key non-residential products in both new and retrofit sectors. The next sections summarize key aspects of the four market categories.

- **$10 Billion HVAC market (wholesale)**
- **Almost half California's residential peak electricity load is air conditioning**
- **1.7 Million new homes in 2003**
- **Over 75% new single-family housing units are production homes**
- **Largest new housing markets are in sunbelt states**

Residential

The Residential sector includes all housing units built on permanent foundations. Subcategories are single- and multi-family. Annual U.S. residential construction expenditures have risen steadily from about $220 billion in 1993 to about $530 billion in 2004. Residences are a major piece of the California energy puzzle, and have similar energy impacts in other U.S. high growth market areas. In 1999, 45% of California's peak electricity load was residential air conditioning, while accounting for only 7% of residential energy[1].

New Residential

This segment includes production, custom, manufactured, and multi-family homes. Annual U.S. new home production totaled 1.71 million units in 2003, of which 81% were single-family and 19% were multi-family. Production builders are moderate-to-large organizations. National builders including the top four (DR Horton, Pulte, Lennar, Centex) have grown significantly in the last ten years, both by entering new markets and by acquiring smaller builders. Most major metropolitan areas also have a few moderate-size production builders who only operate locally or regionally, but the national builder share has grown. For example, in 1996 only five of California's top ten builders were national, publicly-held firms, compared to nine of ten in 2003.

The largest U.S. new housing markets are chiefly in the sunbelt states. The top 50 markets accounted for almost 700,000 single-family units in 2003; more than half this total was in the top ten markets. In the top ten, only Chicago (#5) and Minneapolis (#10) lay north of the Mason-Dixon line. And two Southwest cities (Phoenix and Riverside) were in the top four (with Atlanta and Washington DC). Sacramento ranks 13th nationally. Significant cooling loads are experienced in all of the top ten markets, and air conditioning is always "standard" in these "top-market" production homes.

In smaller towns and rural areas, most homes are either custom-designed or "manufactured." Manufactured homes are usually one-story single-family units similar to double-wide mobile homes, but they are placed on permanent foundations and have "drywall" interiors rather than combustible wall and ceiling panels. Both production and manufactured homes offer the

opportunity to market HVAC units in volume. But manufactured housing's market share has been small and steady at 6% and 1% of single- and multi-family units, respectively.

Most new production homes are equipped with "forced air" heating/cooling systems, and usually use natural gas as the heat source. Manufactured homes in the growing southern-tier markets are most likely to use electric heat (35%), either heat pump or resistance, but natural gas (24%) and LPG (24%) are also widely used. While virtually all production homes in the primary markets provide central air conditioning, the figure is closer to 90% for manufactured homes, which offer some "stripped down" models. **Approximately 88% of all new U.S homes include air conditioning, and the total estimated value of the 2003 new home air conditioning equipment market was $1.8 billion.**

"Energy efficiency is the way to go first…the residential market has been virtually untapped, and that needs to change…"

Justin Bradley, Energy Director, Sillicon Valley Manufacturing Group, San Jose Business Journal, October 8, 2004

Retrofit Residential

The annual market for retrofit residential central AC systems is typically three times larger than the new construction market because of the large stock of existing homes. Many existing homes were built without air conditioning, but in non-coastal climates many have since been retrofitted with either central or room AC units. Nationally, 55% of year-around homes have central air conditioning.

Approximately 85% of the 3.3 million unit per year retrofit central AC market are replacements, and the remainder are new central AC installations in older homes. These numbers indicate that approximately 2.8 million of the 67 million central AC population are replaced each year, for an average replacement interval of 24 years. This long interval suggests that there are at least 20 million existing central AC units whose efficiencies when new were at least 25% lower than current standard models. With typical (lack of) maintenance, these aging units are likely performing at 50-60% of the efficiency of new standard units. Thus, new high efficiency products can double or triple the efficiencies of many existing AC installations.

Non-Residential

Non-residential buildings include commercial, institutional, industrial, assembly, and warehouse categories. The major commercial sub-categories are office and retail; the major institutional subcategories are schools and government offices. U.S. annual non-residential building expenditures rose from about $150 billion in 1993 to a high of $270 billion in 2001, and have fallen back to about $220 billion in 2004.

New Non-Residential

Until the introduction of packaged "rooftop units" (RTUs) in the 1960's, most non-residential buildings used central "built-up" HVAC systems with boilers, chillers, and cooling towers. Since their introduction, RTUs have captured a continually increasing market share. A 1998 report by the American Council for an Energy Efficient Economy (ACEEE) found that RTUs are now used in more than 50% of US commercial buildings. They service approximately 15 billion square feet in more than 2 million commercial buildings in the US. RTUs today dominate the

market in low-rise building categories, and are used on virtually 100% of new "big box" retail and "highway commercial" (mall and office) buildings. Inefficient RTUs create an estimated 3.5% of U.S. CO_2 emissions, thus contributing significantly to global warming. With their fully packaged design that includes all heating and cooling equipment and blowers, RTUs offer low first cost and easy access for service, without interrupting building functions. They have become a commodity item, often costing less than $500 per ton. Central systems using chillers and cooling towers are now specified only for high-end and high-rise projects.

- **Over 50% of U.S. commercial buildings use RTUs**
- **RTUs dominate the market in low-rise building categories, and are used on virtually 100% of new "big box" retail and "highway commercial" buildings**

RTU sizes range from 2 to 180 tons. Surprisingly, installed costs per ton tend to increase with size, chiefly due to higher quality features like variable-speed blowers, and to more expensive ductwork on larger systems. Many large buildings are served by a multitude of small RTUs. This approach is usually less expensive and offers more redundancy with less costly zoning compared to the large "Boxcar" RTUs. 200,000 RTUs in the "under 12 ton" range were sold in 2000.

Current RTUs are nearly all air-cooled and have few differentiating features. Energy Efficiency Ratings typically range between 9 and 12. AEP's RTU has an EER exceeding 18. Four manufacturers control approximately one-third of the total RTU market. These are Carrier (United Technologies), Lennox International, Trane (American Standard) and York International. The next tier of manufacturers is small relative to the total market, with typical company-wide sales of $100 to $200 million.

Despite their success, RTUs have problems that are generally acknowledged in the industry. They often fail to maintain adequate indoor air quality; most RTUs have no system for monitoring the ventilation air rate. Lower ventilation rates are associated with increased respiratory illnesses and a worsening in perceived air quality[8]. Many RTUs have "economizer" accessories to deliver additional outdoor air in favorable conditions, but **a Lawrence Berkeley National Laboratory survey found that due to poor design, lack of maintenance, or insufficient exhaust air only 15-20% of economizers are operating properly.** AEP's HyPak unit includes a much more durable economizer.

Inadequate filtration is another cause of poor air quality with RTUs, whose filters typically have low efficiencies for particles smaller than ~2 micrometers. Recent studies have found increased particle concentrations to be associated with respiratory and cardiovascular deaths, hospital admissions, asthma, respiratory symptoms, and diminished lung function. With better HVAC filters, indoor small particle concentrations could be maintained 75% lower than outdoor air. AEP's HyPak unit includes a high efficiency filter selected by Lawrence Berkeley National Laboratory.

Given the advantages and momentum of RTUs, their large market will likely continue. Improving RTUs is essential to enhancing overall commercial building energy performance.

Retrofit Non-Residential

The existing non-residential building inventory is large and broad, and general observations and conclusions about HVAC retrofit opportunities are therefore difficult. The U.S. has approximately 36.5 billion square feet of floor space in non-residential buildings[2]. Generally, retrofit opportunities for HVAC components are largest for the RTU share of the market, because RTUs are relatively inefficient, and their standardization offers a higher volume replacement opportunity.

The high efficiency RTU market presents increasing retrofit opportunities as the existing RTU stock ages, and offers opportunities on new units as well since typical efficiencies are low relative to performance potential in many locations. Full RTU replacement is expensive, explaining the long replacement interval for most existing equipment. In most cases owners elect to replace major RTU components like compressors, blower motors, and coils, instead of replacing the entire unit. However, these replacements can at best restore the unit to its original efficiency, and so provide only modest help with rising electricity costs. Since most new RTUs have only slightly higher efficiencies than the units they are replacing, most replacements occur either when space use changes or the RTU is clearly no longer serviceable. As electricity costs increase, particularly for on-peak summer use, RTU owners will be increasingly tempted by arguments for more efficient replacements that have short paybacks.

RTU Opportunities

Conventional RTU designs fail to respond to two major energy-efficiency opportunities. The components are packaged by manufacturers in similar configurations that, because they are air-cooled, fail to take advantage of the opportunity to improve efficiency and reduce electrical demand through evaporative condenser cooling. This opportunity is particularly significant in dry climate locations such as California, where more than 1,000,000 air-cooled RTUs were operating as of the year 2000.

In climates where summer afternoon temperatures routinely reach 95°F and the air is dry, RTU cooling efficiencies can be increased by 20 to 50% using evaporative cooling processes. RTU manufacturers are reluctant to offer features and accessories that appeal to regional markets, especially if those accessories require added maintenance. Strategies that reduce evaporative cooling maintenance and clearly demonstrate favorable economics could substantially change the RTU market.

A major untapped opportunity afforded by RTU design is evaporative pre-cooling of ventilation air. Typically, at least 10% of supply air delivered by RTUs is outdoor air needed for building ventilation; in some cases, particularly for laboratory facilities, RTUs deliver 100% outdoor air. In warm weather, cooling of ventilation air represents a significant fraction of the total cooling load. Ventilation air can be pre-cooled by an indirect evaporative process that adds no moisture to the ventilation air. Another opportunity afforded by RTU evaporative pre-cooling is reduction of blower energy consumption. Applying evaporative pre-cooling to both condenser and evaporator sides allows reduced blower speeds that generate large annual energy savings. AEP's HyPak product includes all of these features, generating cooling energy savings exceeding 50%.

THE ELECTRICITY MARKET

Residential and commercial buildings account for 38% of annual U.S. energy consumption. In 1999, commercial building energy expenditures were $66 billion for cooling and $63 billion for heating. Residential building expenditures in 2001 totaled $16 billion for cooling and $50 billion for heating. According to Department of Energy's (DOE) Energy Information Administration (EIA), residential energy use will increase 10% by 2010 and 25% by 2025, and commercial energy use will increase 47% by 2025. An important component of growing residential energy consumption is housing growth in the South, where central air conditioning has become standard. These projections assume that government programs and regulations will drive residential energy efficiency upward; without such policies, residential energy use is projected to increase 28% by 2025.

ELECTRICITY SHORTFALL MAY HAPPEN AS SOON AS 2005

"The California Energy Commission sees a looming problem of blackouts…the state's electricity woes of 2001 could reappear as early as next year."

Sacramento Business Journal, October 7, 2004

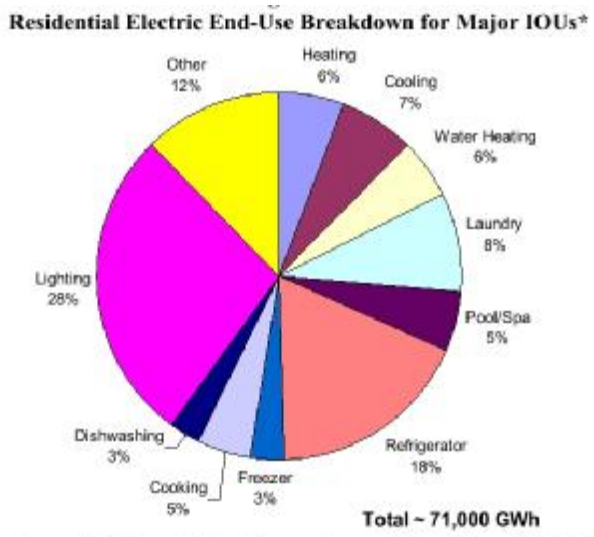
"We are seeing energy loads this summer [2004] that we didn't expect to see until 2006."

Gregg Fishman, California Independent System Operator, San Jose Business Journal, October 8, 2004

Managing peak demand

Air conditioners represent "the load from hell" for electricity generators. In California for example, air conditioning equipment uses 7% of total electrical energy but represents 32% of peak load (more for residential), the worst ratio of all end uses. In Texas, air conditioning has reached 70% of peak load[3]. Tremendous resources must be allocated to power generation equipment to provide on-peak cooling that is only needed 10 to 20 days per year, making peak power the most expensive power.

Electricity service providers are therefore implementing a variety of programs to manage peak demand. Called dynamic pricing, these rate structures alter electricity price signals to encourage conservation during peak hours. Dynamic pricing programs being implemented in certain areas of the country are substantially increasing electricity prices during peak use hours and reducing prices during off-peak hours.

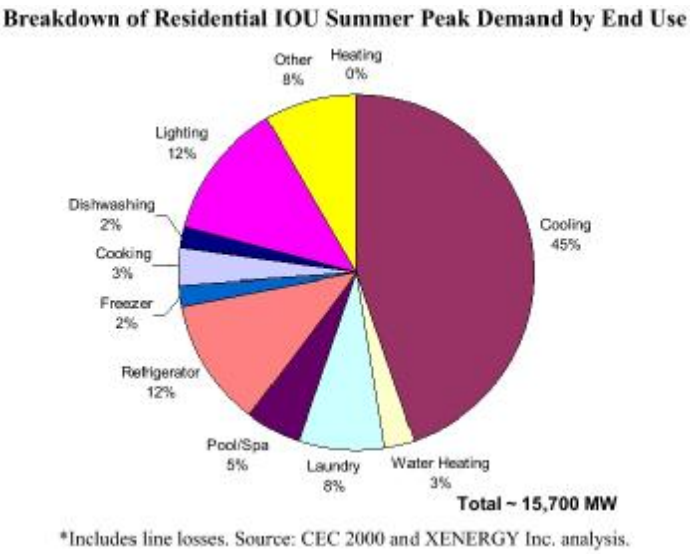


*Includes line losses. Source: CEC 2000. *California Energy Demand: 2000-2010 and XENERGY analysis.*

Dynamic Pricing

The outlook for dynamic pricing

With dynamic pricing, the cost of electricity varies with supply and demand. In most scenarios, prices change every 15 minutes or every hour by signals that are sent to customers' meters. For this reason, advanced meters capable of two-way communications with the utility are required. Real Time Pricing (RTP), Critical Peak Pricing (CPP) and Time of Use (TOU) are all variants of dynamic pricing. In the case of TOU pricing, electricity prices vary on a fixed schedule. In all scenarios, electricity prices are higher during periods of peak load.



The adoption of dynamic pricing tariffs will dramatically increase cooling cost and shorten the paybacks for the low energy cooling systems offered by AEP. This is because air conditioning load is the driver of high peak demand; conversely, air conditioning equipment is used most when dynamic prices are highest. Thus higher prices for peak electricity directly translates to higher cooling and operating costs and greater incentives to put low energy cooling systems in place. In sum, wherever dynamic pricing tariffs are adopted the outlook for AEP's sales will improve.

Real Time Pricing (RTP) tariffs are already being implemented in some parts of the country. RTP has been implemented for business customers of the Georgia Power Company (GPC) and Niagara Mohawk in New York, and several pilot programs have been implemented elsewhere, including California. In the case of GPC's program, the total peak load of participating customers has diminished by as much as 20%. The program has reduced GPC's demand total by 1MW. In California's pilot program, peak prices climbed above 70¢/kWh.

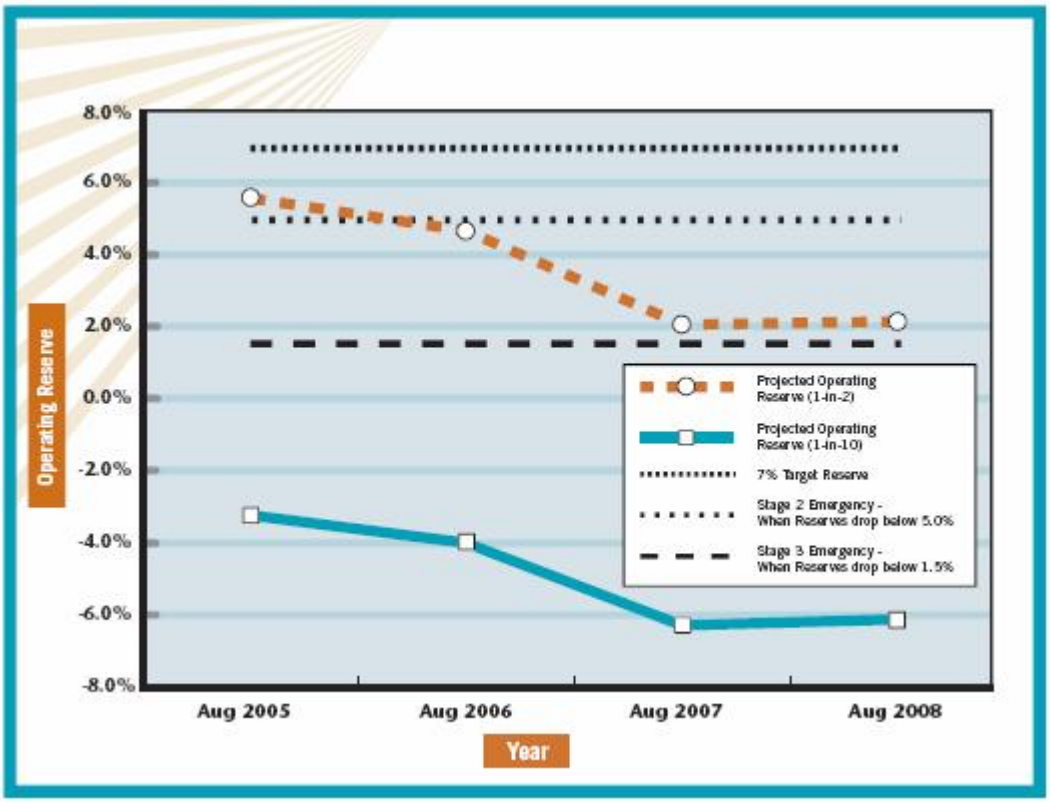
"The legislature finds and declares…electricity consumption for air conditioning purposes during peak demand periods significantly contributes to California's electricity shortage vulnerability during summer periods."

According to the California Energy Commission, dynamic pricing will be expanding in California soon. "Real-time wholesale prices are expected to be determined and made publicly available by the California Independent System Operator (CA ISO) beginning in spring 2005" according to a CEC report of October, 2003.[4] The report was required by CA Senate Bill 1976 which ordered the CEC to report on the process for implementing dynamic pricing in the state.[5] In that bill, "The legislature finds and declares…electricity consumption for air conditioning purposes during peak demand periods significantly contributes to California's electricity shortage vulnerability during summer periods."

How urgent is the need for dynamic pricing?
In October, 2004, the CEC released a 2004 update of its *Integrated Energy Policy Report.* The report states that **"The Energy Commission believes that a combination of actions on the demand and supply sides are necessary to stave off another electricity crisis in the near term."** (Emphasis added)

"The state must accelerate its implementation of demand response programs that signal the actual price of electricity to customers during peak demand periods." [6] To accomplish this, the CEC goes on to recommend that "…the CPUC should immediately require dynamic pricing tariffs for large electricity consumers who already have advanced metering capability. In addition, …the CPUC should approve IOU proposals to modify the current tariff design that could expand program eligibility…for the summer of 2005 and beyond." [7] The CPUC has already required California's investor owned utilities to file demand response plans for summer 2005, and a decision is expected in the early part of the year.

The sense of urgency is illustrated by the figure below, which projects the electricity supply reserve margin for Southern California during peak summer periods through 2008. The peak supply problem is most pronounced in Southern California, which may have negative reserve margins starting in 2005.



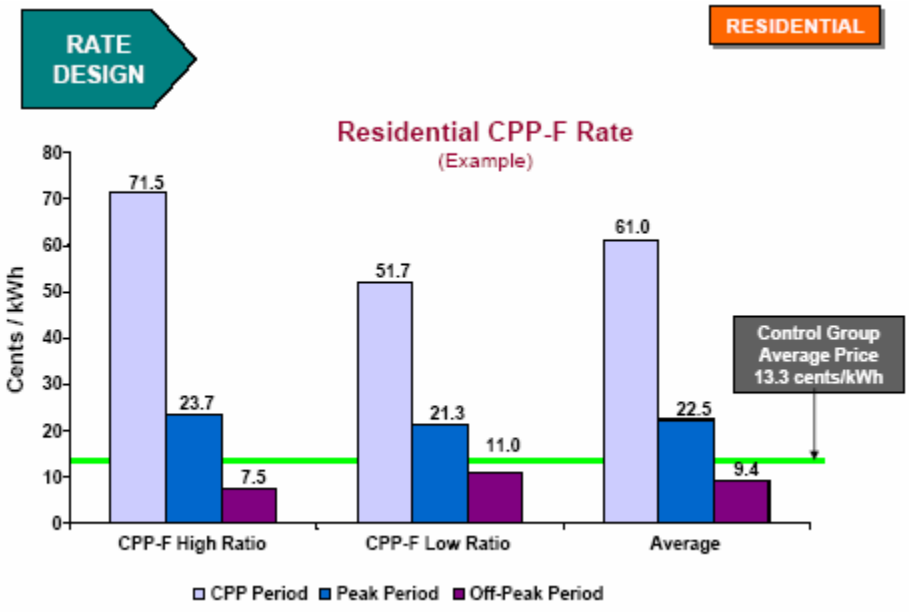
[8]

Effect on electricity prices

Just how much might electricity prices rise during peak cooling periods? In 2003, the three California IOUs established voluntary Critical Peak Pricing (CPP) tariffs. These tariffs raise electricity rates during peak periods, and lower them during off-peak periods. The tariffs are designed so that overall electricity costs are about the same as under flat tariffs for most users; and in fact in a different pilot program conducted by the CEC and the CPUC, "About 80% of customers reduced their bills, and reduction in peak load (coincident) for residential customers averaged about 12%..."[9] However, costs for power on peak are substantially higher than under flat tariffs. The voluntary CPP tariffs offered by the California IOUs have the following effect:

- "PG&E's energy rates during High Priced Periods are five times the Otherwise Applicable Tariff (OAT) for energy and three times the OAT during Moderate price periods.
- SCE's rates are about 6.7 times the OAT during CPP High-price periods and 2.0 times the OAT during CPP Moderate price periods.
- SDG&E's energy rates are 10.0 times the OAT during CPP Period 1 (i.e. the high price period) and 3.79 times OAT for CPP Period 2."[10]

In the California Statewide Pricing Pilot, peak rates were not quite as high. Nonetheless, they were still multiples of average rates, as shown in the graph below.[11]



Underlying electricity costs are likely to increase as well, raising the level of costs whether on peak or off. Sempra Energy Co., the parent of San Diego Gas & Electric Co., recently released a report projecting "that domestic natural gas production will drop 50 percent within 15 years. The resulting shortage, the report warns, will force electricity prices up because most of the state's new power plants use natural gas to generate energy."[12]

No matter the details, the impact of dynamic pricing and rising fuel prices on cooling costs will be dramatic.

Dynamic pricing summary

- *Dynamic pricing of electricity will raise peak power costs by **3x to 10x**.*
- *AC loads drive peak demand, and cooling energy needs are highest during peak periods.*
- *Dynamic pricing tariffs are coming to California commercial and residential customers.*
    - *Voluntary tariffs already exist.*
    - *Mandatory tariffs are being designed and will start taking effect as early as summer 2005.*
- *The CEC recommends that the CPUC immediately require dynamic pricing tariffs for large electric customers that already have advanced metering capability, and that the ability to implement dynamic pricing be expanded by implementing a large-scale rollout of advanced metering systems for smaller customers.*
- *Dynamic pricing of electricity will significantly reduce paybacks and increase demand for the low energy cooling products offered by AEP.*

Incentives, Regulation and Legal Issues

"Upcoming coal [power plant] retrofits will cost billions"

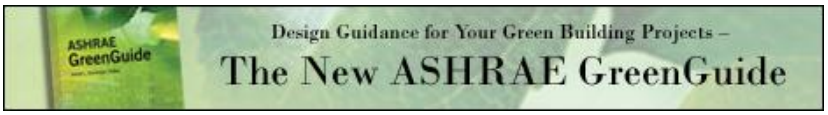
Mark Brownstein, Strategy Director, PSEG, parent of new Jersey's Public Service Gas & Electric

Managing Peak Demand with Rebates

Electricity service providers also manage peak demand by providing rebates toward the purchase of energy efficient equipment. Air conditioning equipment is generally at the top of the rebate list, since energy efficient air conditioners are one of the most cost-effective technologies available for reducing peak demand. For example, PG&E offers up to $600 to homeowners for installing advanced evaporative cooling systems (OASys qualifies), and $700 for efficient vapor compression systems, (PG&E's highest available rebate for residential customers). Commercial customers receive similar rebates per kW of demand reduction.

Energy Efficiency Codes

Many state governments regulate energy efficiency by mandating minimum efficiency standards for building equipment. The Model Energy Code (MEC), published and maintained by the International Code Council (ICC) as the "International Energy Conservation Code" (IECC), contains energy efficiency criteria for new residential and commercial buildings. It covers the building envelope, HVAC equipment, lighting, floors, and power systems. Many states have adopted the MEC and other states have even more stringent codes, such as California's Title 24. This guideline was developed by the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE).



ASHRAE 90.1 is a commercial building energy efficiency guideline that has been adopted as code in many regions. This guideline was developed by the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE). On July 15, 2004, all states were required by the US

Federal Energy Policy Act to have demonstrated that their building codes comply with ASHRAE 90.1-1999.

Regulations

The minimum federal "Seasonal Energy Efficiency Rating" (SEER) standard for residential split system air conditioners has been 10.0 since January 1995. This will increase to 13.0 in January 2006. The single package residential air conditioner minimum standard will increase from 9.7 to 13.0 within the same time frame. These standards are the baselines against which HyCool, OASys, and NightBreeze energy efficiency and economics must compare. AEP residential cooling products are well positioned with average efficiency ratings over double those of competing products[13].

Standards for air-cooled unitary air conditioners range from 8.9 to 8.5 Energy Efficiency Ratio (EER) for 5- to 10-ton and 10- to 20-ton units, respectively. Effective October 2004 the minimum standards for evaporatively-cooled air conditioners, which may apply to HyPak RTUs, are 11.5 and 11.0 EER for 5- to 10-ton and 10- to 20-ton units, respectively. HyPak measured efficiency ratings exceed competing products by over 40%[14].

Operating efficiency is also addressed by the Energy Star Program. The key piece of legislation in this area is the National Appliance Energy Conservation Act of 1987. Also, through their Energy Star label program, introduced in 1992, the EPA and Department Of Energy encourage the development and sale of energy efficient heating and cooling systems. To earn the Energy Star label, room air conditioners and dehumidifiers are required to be at least ten percent more energy efficient than the minimum federal government standards, and central air conditioners and heat pumps must be at least 20 percent more efficient.

Regulations regarding the types of refrigerants used in HVAC systems have had a significant impact on the industry since the late 1980s. In May 1995, the Environmental Protection Agency (EPA) published a rule requiring the elimination of US production of chlorofluorocarbons (CFCs) by the start of 1996 and of all hydrochlorofluorocarbons by 2030. As a result, the US no longer produces HVAC equipment that utilizes CFCs and is actively developing alternative refrigerants such as chlorine-free *PURON* (Carrier). Manufacturers are also exploring the use of carbon dioxide and other refrigerants in cooling equipment.

Governments regulate their own buildings

A number of states and municipalities have established building energy efficiency standards for new government buildings that exceed the minimum regional code. The LEED® standard (see the next section entitled the *Green Building Movement*) has become an increasingly popular way to set

July 27, 2004: Governor Schwarzenegger signed Executive Order S-12-04 requiring that all state agencies reduce energy use during the peak summer season.

goals for building performance. A number of governments, including the states of Maine, Maryland and Michigan; and the cities of Atlanta, Chicago, Berkeley, Dallas, Kansas City, Los Angeles, Omaha, and San Francisco, have mandated that their new buildings be built to the LEED standard. This trend is expected to grow significantly in the next several years.

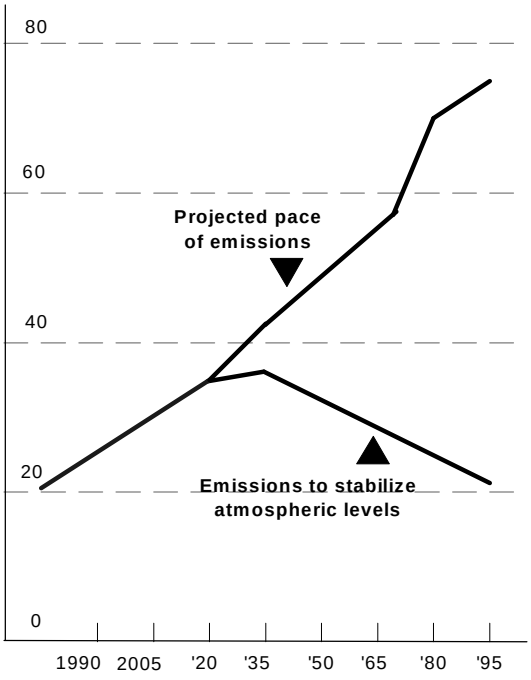
The California government has addressed energy consumption and peak demand on a slightly different tack. On July 27, 2004, Governor Schwarzenegger signed Executive Order S-12-04 requiring that all state agencies reduce energy use during the peak summer season. In addition, Governor Schwarzenegger held discussions with members the California Independent System Operator (CAISO), the Public Utilities Commission (PUC) and business leaders to encourage the use of Demand Response Programs.

More than 120 nations have approved the Kyoto Protocol to combat global warming, the US hasn't yet. US [companies] doing business overseas [must now] look for ways to comply.

Global warming

Energy consumption for buildings generates roughly 35% of greenhouse gas emissions (that lead to global warming). Two recent events in the U.S. highlight the increasing awareness of greenhouse gas emissions. In the first, New York, California, Iowa and three other states filed a lawsuit in July 2004 against several of the nation's largest electric-power companies—including American Electric Power Co., Columbus, Ohio; Southern Co., in Atlanta; Xcel Energy Inc., Minneapolis; Cinergy Corp., Cincinnati; and the federally owned Tennessee Valley Authority—in a bid to force reductions in greenhouse-gas emissions blamed for global warming. Vermont, Wisconsin, New Jersey and New York City are also party to the suit[15].

Emissions Gap -
To keep atmospheric CO_2 levels from rising above levels some scientists consider dangerous, emissions would have to be cut. Below, CO_2 emissions per year, in billions of tons at 550 parts per million of CO_2.



California's Air Resources Board approved regulations in September 2004 that require a 25% reduction of the greenhouse gas emissions of California's cars and light trucks and an 18% reduction of its trucks and sport utility vehicles. While this regulation does not directly address electricity consumption, it signals an important trend in the state's willingness to curb greenhouse gas emissions.

The urgency of addressing global warming is likely to increase. According to the **Wall Street Journal**, "Many scientists say the Earth can tolerate CO_2 levels of about 550 parts per million before it faces a lot of dangerous climate effects…the globe could approach that point around the middle of this century"[16] (right).

Renewable energy sources will be only a small part of the answer. The **Wall Street Journal** goes on to say "Wind and solar power and a re-emergence of nuclear power offer potential help, but they face major political and economic challenges. In the U.S., renewable energy's share of total energy consumption is expected to remain about the same for the next quarter century, the Department of Energy predicts. In 2001, that was about 6%."

Energy efficiency technologies will have to be a big part of any efforts to reduce CO_2 levels, and could generate valuable carbon credits. Carbon emissions trading has already commenced in Europe, with 5,000 tons of CO_2 for delivery on January 1, 2005, selling for about €12 per ton or about $15. AEP's financial projections take no credit for the value of avoided emissions – representing significant upside potential.

GREEN BUILDING MOVEMENT

What is Green Building?

Green Building is a process to create buildings and supporting infrastructure that minimize the use of resources, reduce harmful effects on the environment, and create healthier environments for people. The major areas of green building addressed as part of building design and construction are:

- Improving Energy Efficiency
- Enhancing Indoor Environmental Quality
- Planning Sustainable Sites
- Safeguarding and Conserving Water
- Conserving Materials and Resources

An estimated $15 billion worth of green buildings are currently in design or under construction in the U.S., representing 12-15% of total public construction and about 2% of private-sector construction. Although that $15 billion represents less than 5% of the total $315 billion U.S. annual construction for commercial, industrial, and institutional buildings, the category is growing at the rate of about 75% a year. [17]

"US businesses can save as much as $58 billion in lost sick time and $200 billion in worker performance if improvements were made to indoor air quality improvements"

Lawrence Berkley National Laboratory Report, Health and Productivity Gains from Better Environments, William Fisk

"People want to work here because of our [LEED Silver rated] building. Absentee has decreased, productivity has increased, recruitment is better, and turnover less."

Senior VP and Director of Corporate, Real estate, PNC Fireside Center, Pitttsburg

Benefits of Green Building

The implementation of green building strategies results in numerous benefits to: the building owner, occupants, project team, the greater community, and society at large. The following are a few of the advantages green buildings have over conventional buildings:

- **Savings on operating costs** for energy and water bills.
- **Productivity and performance gains from worker health and well-being,** resulting from good daylighting and views, good indoor air quality, and thermal comfort and control.
- **Reduced burdens on municipal infrastructure and reduced service costs** (e.g., wastewater treatment facilities, water supplies/transport, landfills, stormwater systems,

roadways, etc.) — an economic benefit to taxpayers, as well as state and local governments.

- **Quality assurance:** Through the building commissioning process, the owner gets assurance that they are getting what they paid for: high quality, high performance buildings that operate and perform as designed.
- **Reduced maintenance and replacement costs** (e.g., through the use of durable materials, and extended life of systems through proper commissioning).
- **Reduced insurance costs and liability risk** (from "sick building" litigation cases, workmen's compensation, and mold-related claims). Risks minimized by proper indoor air quality measures and building commissioning procedures.

History of Green Buildings

Over the last 15 years, green building has grown rapidly prompted by increasing environmental concerns, the growing evidence of a connection between global warming and CO_2 emissions related to energy consumption. In addition, the documentation of health, productivity, and economic benefits associated with green buildings has contributed to this trend. The US Green Building Council (USGBC), a non-profit organization, is the nation's foremost association of building industry leaders working to promote environmentally responsible design of the buildings in which we live and work. The council was formed in 1994, membership in the organization now exceeds 5,000 firms including: contractors and builders; Fortune 500 and other corporations; educational institutions; federal, state and local governments; financial institutions; product manufacturers; professional firms; utilities and energy service companies.

"The new materials and technology are being used in a wave of buildings designed to save as much energy as possible….about 4% of new commercial construction is now completed under LEED guidelines"

www.cnn.com, October 25, 2004

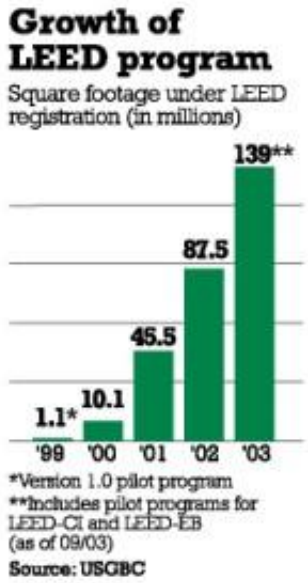
What is LEED?

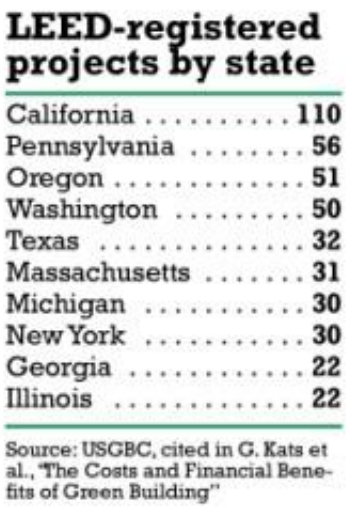
The LEED (Leadership in Energy and Environmental Design) Green Building Rating System® is a voluntary, national standard for developing high-performance, sustainable buildings. LEED is administered by the USGBC. LEED awards points for meeting defined standards in various categories to provide a framework for assessing building performance and meeting sustainability goals. Energy efficiency and indoor air quality are key components to the system. Energy efficiency alone represents 17 points out of the potential of 37 points in the LEED New Construction (NC) rating system.

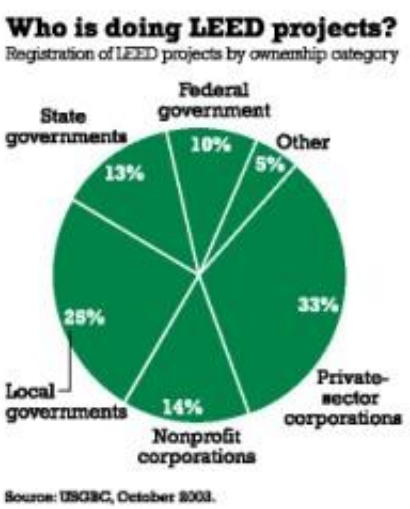
LEED certification is akin to a "seal of approval" that provides validation and recognition of a building's environmental attributes. The different certification levels (Certified, Silver, Gold, and Platinum) provide a basis for comparing the levels of "greenness" among different buildings. Currently, LEED New Construction and LEED Major Renovations is being used in the marketplace. In 2005, LEED EB (Existing Buildings) and LEED CI (Commercial Interiors) will be available for use. LEED Residential is also in development and should be available by 2006.

The use of LEED NC has been required in one way or another by at least 30 local governments, 12 states, and at least 8 federal agencies. LEED standards are being adopted by more government agencies all the time. As of September 2004, 130 buildings have been LEED

certified, and more than 1,500 buildings have been registered for LEED (indicating intent to apply for certification).







The high efficiency, high ventilation equipment offered by AEP can be key to receiving a LEED rating in the most cost effective manner. Growth of the LEED family of green building rating systems will be a catalyst for the rapid growth of AEP.

DOE PROGRAMS

Zero Energy Homes

The Department of Energy's Zero Energy Homes (ZEH) program was established in 1999 to foster collaboration between production builders and the renewable energy and energy efficiency industries to build homes that produce nearly as much energy as they consume on a net annual basis. The National Renewable Energy Laboratory (NREL), which manages the program, selected Davis Energy Group (DEG) to serve as one of the four national ZEH team leaders. DEG's team includes Centex Homes, a top ranked U.S. builder, and other smaller builders. In collaboration with the Florida Solar Energy Center, DEG developed a process for designing homes that combine photovoltaic systems and cutting edge energy efficiency measures in the most cost-effective manner. One pilot zero energy home and two zero energy models have been completed, and the Centex Northern California Division is now marketing zero energy as an option in some of its subdivisions In addition to technical support and design services, DEG has provided marketing support by assisting with branding, and by developing computer-based visual aids to help homebuyers understand the benefits of energy efficiency and building-integrated solar energy technology. The California Energy Commission is currently soliciting proposals for a similar, California based program called Zero Net Energy Homes.

Building America Program

Building America is another program funded by the DOE to improve the efficiency of residential new construction. Building America supports research and development activities to produce homes that use up to 70% less energy, with little or no increase in construction costs. Davis Energy Group joined the Consortium for Advanced Residential Buildings (CARB) led by Steven Winter Associates (of Norwalk, Connecticut), one of five Building America teams. DEG's primary role in CARB is to research advanced technologies and facilitate their integration into buildings, and to provide monitoring and evaluation of these technologies.

Due to the high price of photovoltaic (PV) modules ($6-$7 per watt, installed), zero energy homes are expensive to implement. To address this issue, the DOE is also funding product development efforts to develop lower-cost building integrated solar technologies. Davis Energy Group has participated in this program as well, and is completing the first phase of product development for a solar thermal/PV hybrid system that speeds the installation of building integrated solar and reduces costs by eliminating redundant or unnecessary building components.

DEG's participation in these programs provides it with an excellent opportunity to introduce AEP's products to builders, and to demonstrate their superior performance with government sponsorship.

[1] CEC Demand Analysis Office (Taim, 2001)
[2] EIA, 1999 *Commercial Buildings Consumption Survey*
[3] http://www.eere.energy.gov/state_energy/technology_faqs.cfm?techid=15
[4] *Feasibility of Implementing Dynamic Pricing in California*, CEC, 400-03-020F, October , 2003
[5] SB1976, Torlakson, Chapter 850, September, 2002
[6] *Committee Final Report, Integrated Energy Policy Report, 2004 Update*, CEC, 100-04-006 CTF, October, 2004, page vii
[7] IBID, page viii
[8] IBID, page 9
[9] IBID, page xiii
[10] California Energy Commission, *Working Group 2 Demand Response Program Evaluation, Summary of Phase 1 Research* , Quantum Consulting, Inc. April 8, 2004, pages 3-2 and 3-3
[11] *Statewide Pricing Pilot PowerPoint*, CEC, October 5, 2004, slide 11
[12] **Sacramento Business Journal**, *Baja Natural Gas Terminal Essential*, Utilities Tell PUC, October 22, 2004
[13] See Competitive Position Section, Table 1
[14] See Competitive Position Section, Table 1
[15] **The Wall Street Journal,** *July 21, 2004*
[16] **The Wall Street Journal,**, *As Planet Heats Up, Scientists Plot New Technologies*, October 22, 2004
[17] (*Source:* **Building Design and Construction**, *November 2003. www.bdcmag.com*)

PRODUCTS

AEP's product offering is summarized below and described in the following sections.

AEP Product Matrix

	Product	Description	Status
Residential - NightBreeze Product Line			
R	NightBreeze - Hydronic	NBreeze with hot water heating	Ready for production and marketing
R	NightBreeze - Gas	NBreeze with gas furnace	Development close to complete – Test & demo '05
R	NightBreeze – Humid	NBreeze for humid climates	Under development
R	NightBreeze – Apartments	NBreeze for Apartments	Under development – Ready for market testing '05
R	NightBreeze – Retrofit	NBreeze for existing houses	AEP to develop '05
C (R)	NightBreeze – Plus	NBreeze plus indirect evaporative cooling	DEG concept
Other Residential Products			
R	ZTE	2 zone damper for forced air systems	Available for marketing
R	Smart Vent	Residential ventilation for gas furnace systems	Available for marketing
R & S	OASys	Indirect-direct evaporative cooling for residences and school rooms	Introduce in '05
R & S	IDEC^3	OASys plus a small compressor	DEG concept
R	HyCool	High efficiency water cooled condenser	DEG concept
R	Water Heat Recovery System	Recapture heat from shower drain	Development commenced 3Q04 by DEG
Commercial Products			
CM	HyPak – OA	High efficiency RTU – 100% OA	Ready for production and market introduction in 2005
CM	HyPak – MA	High efficiency RTU with OA/refrigerated air mix	Awarded funding to complete development
CM	HyPak – DC	Conventional RTU supplemented with evaporative air cooling	DEG design – Ready for prototyping
Product Concepts			
C (CM)	Indirect Evaporative Heat Recovery Ventilator	Provides pre-cooled or pre-heated vent air	DEG concept
C (R&CM)	Low cost Geothermal Heat Pumps	Low cost inserts for GHP	DEG concept
C (R)	High Efficiency Pool Filters	Pool filtration at low cost	DEG concept
C (R)	Solar/Geothermal Heating	Gasless Heating	DEG concept

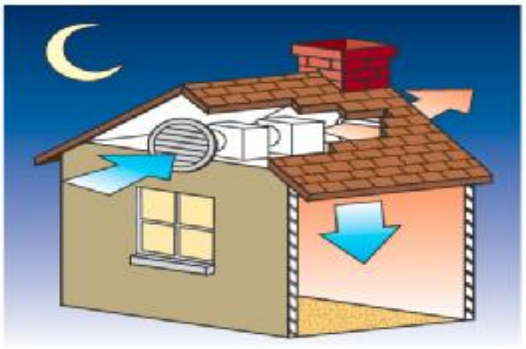
R = Residential S = Schools C = Concept CM = Commercial

NIGHTBREEZE

The NightBreeze Night Ventilation Cooling System uses cool night air to naturally ventilate and cool without having to open and close windows. In summer, when a house is warm and outside air is cool, the NightBreeze system automatically brings outdoor air in and distributes it through the filter, ducts and registers. The system automatically turns off when a target temperature, calculated to maximize comfort, is achieved. During warm summer days, the cooler indoor air is recirculated and can also be air conditioned (with optional AC system). In winter, NightBreeze provides heat with a hydronic coil or gas furnace and ventilates just enough to keep indoor air fresh.

NightBreeze Thermostat

NightBreeze ventilation cooling can eliminate or greatly reduce the need for compressor air conditioning in most of California and the mountain west, and can yield annual energy savings greater than 60% in some climate zones. At the same time, NightBreeze greatly improves indoor air quality (IAQ). Both efficient HVAC and improved IAQ are key components of green building guidelines and standards, such as the Leadership in Environmental and Energy Design (LEED) green building rating system. Introduction of the LEED residential rating system by the U.S. Green Building Council is likely to improve AEP market opportunities. Alameda County's Green Building Program personnel have already promoted NightBreeze with other builders in their jurisdiction.



Night Ventilation Cooling

Daytime Recirculation and Air Conditioning

<u>NightBreeze – Hydronic</u>

The hydronic version of NightBreeze includes a hot water air handler, damper, and controls. The air handler includes an electronically commutated (ECM) motor that provides variable speed operation for heating, ventilation cooling, and fresh air ventilation. The outside air damper selects between outside air and return air, filters both, and provides air relief so that windows do not have to be opened. Development of NightBreeze - Hydronic is complete.

DEMONSTRATIONS

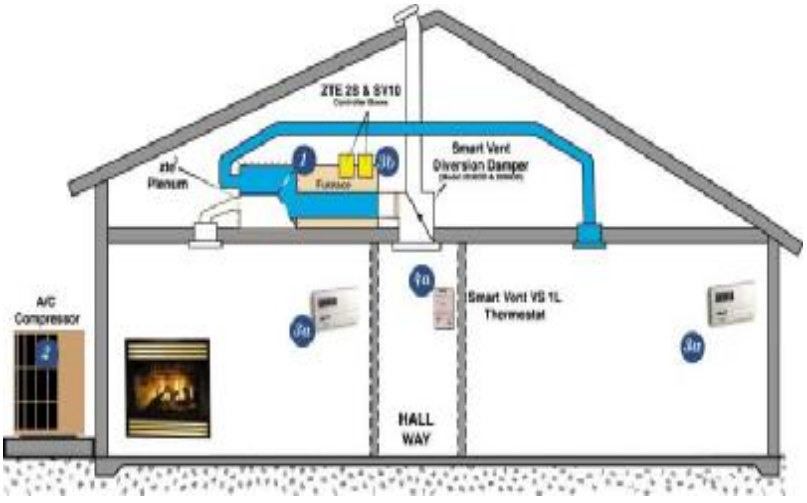
NightBreeze – Hydronic was successfully demonstrated in pilot homes in Watsonville and Livermore CA, and the houses were monitored for more than a year. The Watsonville house (built by Clarum Homes) maintained comfortable temperatures without air conditioning installed. The Livermore house (built by Centrex homes) operated its two air conditioners a combined total of 7.4 hours (average of less than 3 minutes per day) during the summer of 2003, which included 15 days with temperatures over 100°F.

Other related outcomes from the demonstrations include:

1. Inclusion of the NightBreeze system in the Power Saver Plus buyer option package being offered in its Windermere subdivision (San Ramon, CA) marketed by Centex Homes.
2. Widespread publicity including articles in *Home Energy* and *Discover*, and television coverage by local stations and by Peter Jennings on the ABC network.
3. NightBreeze demonstrations being installed by Southern California Edison and on ten Habitat for Humanity homes,for a *Building America* project.
4. Five NightBreeze – Hydronic systems installed in custom homes.
5. Initiation of projects to expand NightBreeze technology to furnaces (NightBreeze – Gas), and into humid climates (NightBreeze – Humid).

NightBreeze – Humid

New homes in humid climates have high dehumidification (latent) loads from fresh air ventilation. Conventional air conditioners cannot remove enough moisture to keep homes comfortable and eliminate the risk of mold growth without overcooling the space. Dehumidifiers remove moisture, but add heat to indoor air, effectively reducing cooling efficiency by over 30%.



NightBreeze – Humid is a heating and air conditioning system that responds to indoor temperature **and humidity** conditions. NightBreeze - Humid adjusts the ratio of cooling and dehumidification to control both indoor temperature and humidity, and supplies dehumidified outside air to improve indoor air quality. The system uses standard refrigeration components with a variable speed air handler, and uses much less energy than an air conditioner and dehumidifier. Dehumidification is provided by moving air over the evaporator coil at low speed. If needed, a sub-cooling coil is activated to reheat the supply air. Initially demonstrated with DOE SBIR Phase I funding, the project was awarded Phase II funding of $635,000 in May of 2004 for development and testing of a market-ready system.

NightBreeze – Gas

The gas furnace version of NightBreeze includes a two-stage furnace, a variable speed blower, a damper and controls. Air conditioning provided by a DX coil is optional. This version of NightBreeze is essentially a top-of-the line gas furnace with the NightBreeze features built in. NightBreeze – Gas is now under development, with the Amana Division of Goodman Manufacturing providing input, hardware and some technical support. Development is targeted for completion in the first part of 2005.

ZTE

In single-zone two-story houses with the thermostat downstairs, the upstairs becomes too warm in both seasons. The Zone Thermal Equalizer (ZTE) assures uniformed, controlled temperatures on both floors of a two story house. The ZTE was developed by Beutler Corporation and RCS, with assistance from DEG. It is currently actively marketed in northern California only by Beutler Corporation, yet there is significant market potential throughout the rest of the country.

ZTE includes a damper box that directs conditioned air upstairs, downstairs or to both floors, depending upon comfort needs, as directed by dual thermostats: one for each floor. ZTE automatically coordinates operation of the dampers and the HVAC system. It works with most standard electronic thermostats and forced air HVAC systems.

SMART VENT

Developed in the 1980's by Beutler Corporation, Smart Vent was initially designed as an independent residential ventilation system. When outdoor temperature is a few degrees or more cooler than indoor temperature, and the Smart Vent thermostat calls for cooling, the system ventilates the house with the cooler outdoor air. Smart Vent was designed for California, where summer nighttime temperatures often drop into the 60's. The system operates independently of the HVAC system, and can be coupled with most gas furnaces and air conditioners. Marketed to northern California home builders and new home buyers by Beutler Corporation, Smart Vent has been very popular with homeowners. The system is not actively marketed outside northern California.

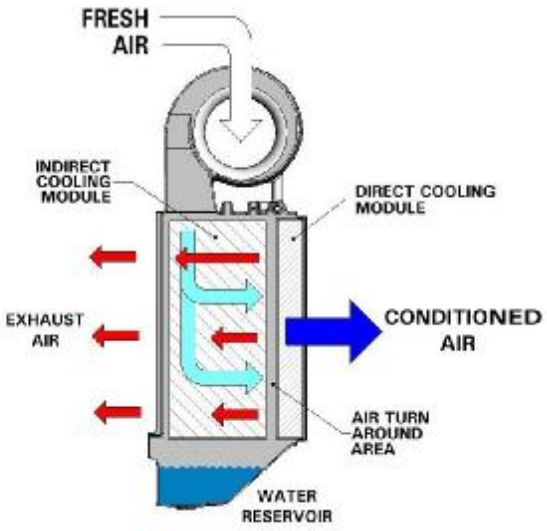
RCS and Beutler have recently integrated the thermostat that controls Smart Vent with the conventional thermostat. However, the combined system still does not pre-cool the house to optimize the benefits of ventilation cooling. Also, Smart Vent does not provide ventilation in winter or at other times unless there is a call for cooling and outdoor temperature is below indoor temperature.

The NightBreeze system answers the need for these added features. Until Nightbreeze – Gas is available (the NightBreeze version designed to work in conjunction with a gas furnace), AEP will market Smart Vent to home builders and new home buyers in Southern California and other potential markets. AEP's version of Smart Vent will include the simplified integrated NightBreeze thermostat.

OASYS

OASys is an ultra-efficient system that supplies cool air to residential and small commercial buildings. Because it does not use a compressor and does not need ducts, OASys is less expensive than conventional air conditioning systems, and uses 90% less energy. It is designed for use in dry, low humidity climates.

Concept Description



OASys uses Indirect-Direct Evaporative Cooling (IDEC) to cool air to lower temperatures than are attainable with direct (one-stage) evaporative coolers, and adds less moisture to the indoor air. The system uses a proprietary indirect evaporative cooling module (similar to HyPak's CEWC) to indirectly cool incoming air without moisture addition. The air is further cooled by a direct evaporative cooling stage. The indirect evaporative cooling module allows OASys to supply air that contains less moisture and is 5 to 7 degrees cooler than air supplied by direct evaporative coolers. Expertise in the design of these systems is not widely available.

OASys is equipped with advanced electronic components and controls that monitor water quality to ensure reliable and clean operation of the unit. Its variable speed blower motor allows the system to run at low blower speeds—where it is quieter and more efficient—during much of the day.

OASys is constructed with polymeric components to increase reliability and reduce costs. The OASys cabinet, blower housing and water reservoir are incorporated in a single rotationally molded part that will not corrode or leak. The high profile indirect cooling plates are manufactured via an economical thermoforming method.

Performance and Benefits

In a typical home, OASys will reduce peak demand by roughly 2.8 kW and save 1,500 kWh per year[1]. In addition to providing significant energy savings, IDEC units improve indoor air quality by providing filtered and "washed" 100% outdoor air and running continuously at low speeds.

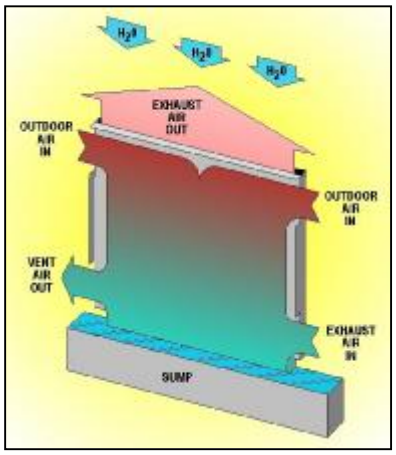
Contaminants such as volatile organic compounds and particulate matter, which significantly affect occupant health, are therefore reduced in buildings that use IDEC units.

Because OASys supplies cooler, dryer air than conventional direct evaporative cooling systems, it adds less moisture to the building air to reach the desired indoor temperature setpoint.

OASys peak demand reduction will attract the attention of many utilities, and it will be especially attractive in cases where continuous ventilation air is required, as in modular classrooms and other school applications.

HYPAK

HyPak is an advanced RTU with major competitive advantages over currently available RTUs, including significantly lower operating costs and continuous supply of ventilation air. By combining the energy efficiency of evaporative cooling with the capacity and dehumidification of vapor compression cooling, it consumes approximately half as much energy as conventional systems. HyPak was developed by DEG, in conjunction with Des Champs Technologies, under a project funded by the US Department of Energy.



Concept Description

HyPak's proprietary Counterflow Evaporative Water Cooler (CEWC) virtually eliminates the energy penalty associated with introducing outside air into a building in the cooling season. In the cooling season, the CEWC pre-cools ventilation air via indirect evaporative cooling and simultaneously cools water from a high efficiency condenser. In the heating season, water to the CEWC is turned off and incoming fresh air is warmed by the outgoing building exhaust air before being conditioned by a high efficiency gas heater.

Advanced controls enhance energy efficiency by intelligently driving a variable speed supply air blower, improve comfort by supplying fresh air at the optimal temperature and humidity, and optimize CEWC performance by monitoring water quality and introducing fresh water as needed.

Performance and Benefits

Because HyPak uses evaporative technology to provide cooling, its performance relative to conventional air conditioning systems increases as the outdoor temperature rises. Therefore it will be especially appealing to customers seeking to reduce the expense of running equipment during peak hours and to utilities seeking to reduce peak demand. Computer model projections for HyPak in California Climate Zone 12 (Sacramento) show 55% annual energy savings and 45% peak demand savings versus a standard efficiency RTU. Des

Champs Technologies has agreed to manufacture HyPak and help promote the product.

Two HyPak models will be introduced: HyPak – OA, a 100% outdoor air system (projected availability in late 2005) and HyPak – MA, a variable outdoor air system that permits recirculation of indoor air (projected availability in 2006). In addition, HyPak – Dual Cool is targeted for early development. This system marries indirect evaporative cooling of ventilation air plus evaporative cooling of condenser air with a conventional air cooled RTU. It can be prototyped and readied for private label production within one year and could provide a quick entry to the commercial market for AEP. Dual Cool is an existing commercial retrofit product that can be added to packaged rooftop units to enhance their efficiency. Currently, this patented technology is available in a high cost, high feature design and is under non-exclusive license to Integrated Comfort Inc.

HyPak Features, Advantages and Benefits

Feature	Advantage	Benefit
1. High EER	1. Lower operating costs	1. 40%-60% utility savings
2. Lower energy use	2. Reduced peak demand	2. Lower burden & costs for utilities
3. Vent air blower	3. Reliable fresh air flow	3. Improved IAQ
4. Vent air flow monitoring	4. Measurement	4. Meets new standards
5. Variable Speed Blower	5. Vary supply with load	5. Comfort

OTHER PRODUCTS

Davis Energy Group and its partners continue to originate and develop innovative products and systems to meet residential and commercial comfort needs. In essence, DEG is an on-going pipeline of new products and product variants for AEP. Product variants currently in development include NightBreeze – Gas, NightBreeze – Humid and NightBreeze – Apartments. Product variants soon to be developed include NightBreeze – Retrofit (for existing houses), NightBreeze – Plus (with indirect evaporative cooling) and IDEC^3 (OaSys with a small compressor). AEP will also have the ability to supply the fan-coil portion of NightBreeze-Hydronic to developments built with decentralized combined heat and power systems. These systems are common in Europe, highly effecticient and include district heating (and sometimes cooling) loops. NightBreeze – Hydronic is an excellent match with these systems. DEG is currently undertaking a feasibility study of the applicability of such systems in the U.S. for the California Energy Commission. MVV Energie of Mannheim Germany is DEG's partner in this project. If CHP systems prove feasible in this country, AEP is well positioned to be first to offer product to this new market.

In September, 2004, the DOE notified DEG that its proposal to further develop HyPak – Mixed Air was selected for funding. The contract should be in place so that this project can begin in the first quarter of 2005, providing $1.3 million of additional DOE funding to further develop the HyPak product line.

DEG is also working on entirely new product lines. The company is developing a compact heat recovery device under a contract with the US Navy to capture the heat from shower water drainage and use it to pre-heat shower water. DEG's concept for an indirect evaporative heat recovery ventilator recently narrowly missed federal funding and will be resubmitted in a future round. Similarly, an efficient water cooled condenser for residential split system air conditioners has been conceptualized (HyCool). Funding will be sought for HyCool in the future.
Other product concepts under discussion include high efficiency pool filters, low cost loop installation methods for geothermal heat pumps, (for heating and cooling without the use of natural gas), loopless geothermal heat pumps for commercial applications and combined solar and geothermal heating systems.

DEG's ability to garner government funding for R&D and to partner with capable and successful HVAC manufacturing firms will provide AEP with a continual supply of innovative products for commercialization. AEP's closeness to the market will enable it to provide meaningful market input to DEG's product development process and ensure that products are developed that will be accepted by the market. Similarly, AEP will be a conduit for product improvement ideas for design and testing by DEG. This symbiotic relationship, along with strategic selection of product development projects, bodes well for continued growth in AEP's sales and profitability.

COMPETITIVE POSITION

AEP's products consistently provide more ventilation and consume less energy than those of its competitors. Nonetheless, projected mature AEP product prices are highly competitive with conventional products. The table below tabulates AEP products, their efficiency ratings and projected mature wholesale prices compared to representative competing products. Competing product data includes manufacturer identification, the equipment combinations being compared, comparative efficiency ratings, and wholesale pricing[2]. In every directly competitive case, AEP price premiums will return substantially greater lifecycle cost benefits from energy efficiency, comfort, and enhanced ventilation.

AEP Products Compared to Representative Competing Products

Line #	AEP Products	AEP Eff Rating	AEP Price (mature)	Competing Products (CP)	CP Eff Rating	Price
1	NightBreeze-H/Gas	>12 SEER	$2,000	Goodman gas heat split 3-ton AC	12 SEER	$1,994
2	NightBreeze-Humid	>18 SEER	$4,000	2-spd gas heat split 3-ton AC	17.5 SEER	$3,875
3	OASys	50 EER	$2,500	5600 CFM Evap Cooler	N/A	$817
4	OASys2	50 EER	$2,500	MasterCool 2-Stage EC	18 EER	$2,147
5	OASys+	40 EER	$3,300	2-spd split 3-ton AC	13.2 EER	$2,325
6	HyPak OA	17 EER	$7,000	10-ton Packaged AC, gas heat, CAV	12 SEER	$6,075
7	HyPak MA	17 EER	$10,000	10-ton Packaged AC, gas heat, CAV	12 SEER	$6,075
8	ZTE	N/A	$385	Other packaged zone controls	N/A	$400
9	Smart Vent	N/A	$1,025	Other residential economizers	N/A	N/A
10	HyCool	>17 EER	$2,100	2-spd split 3-ton AC	13.2 EER	$2,325
11	HyCool	>17 EER	$2,100	Freus Evaporative Condenser	17 EER	$1,816

NightBreeze

The NightBreeze line, including hydronic heating (H), gas heating (Gas), and humid climate (Humid) models, are priced within $10 of representative competing equipment. NightBreeze-H/Gas is priced within $6.00 of the 12 SEER Goodman gas heat split air conditioning system, the representative comparison case. While precise cooling efficiency equivalents (SEER) for NightBreeze have not been established, monitored field test data demonstrates the NightBreeze equivalent SEER in some climates is double that of conventional product, and NightBreeze also offers the comfort advantage of automated fresh air ventilation. NightBreeze-Humid is projected to sell at a modest premium to the representative comparison, in this case the average price of 17.5 SEER 2-speed gas heat split air conditioning systems offered by the four largest US manufacturers of HVAC products. NightBreeze-Humid is projected to be 30% to 60% more energy efficient than conventional products and additionally offers automated fresh air ventilation.

OASys

The most representative OASys comparison is the AdobeAir MasterCool 2-stage evaporative cooler. MasterCool is priced about 16% below OASys, but OASys offers energy efficiency benefits (EER) nearly double MasterCool, as well as sound level, indoor air quality, comfort and other serviceability advantages. OASys+, which will incorporate supplemental vapor compression cooling compared to a premium efficiency two-speed split air conditioning system, packs a wholesale price premium around 40%, but has a triple energy efficiency advantage comparable to standard high efficiency conventional AC.

HyPak

The HyPak Hydronic Packaged Rooftop unit for small to medium commercial markets will be offered in a 100% outdoor air version (“OA”) and a variable mixed ventilation air version (“MA”). Both versions will compete against conventional rooftop packaged units. HyPak’s cost premium will be offset by the system’s demonstrated efficiency advantage (55% annual energy savings, 45% peak demand savings versus 10 EER), and substantial air quality and comfort advantages.

ZTE and Smart Vent

The Zone Thermal Equalizer and Smart Vent products will be marketed under license agreement from RCS and Beutler Corporation. They are currently competitively priced compared to the comparison case, considered to be representative of this market segment.

HyCool

HyCool evaporative condensers are projected to have a nearly 10% cost advantage over premium efficiency two-speed split air conditioning systems, a nearly 30% efficiency advantage, and substantial serviceability advantages associated with a more favorable compressor operating environment. HyCool will surrender a 15% wholesale advantage to Freus, the sole competing commercialized product of this type. HyCool is expected to more than hold its own in this market sector with significant efficiency advantage, higher initial product quality and manufacturer support.

AEP COMPETITIVE ADVANTAGE

AEP is the first company to market and distribute exclusively green HVAC equipment. Advantages of our products include:

- Provide cooling while cutting energy consumption 50%+.
- Reduce peak power demand for utilities 50%+.
- Short paybacks (~ 2 years).
- Utility and government rebates/incentives.
- Superior comfort.
- Easy installation.
- Easy and inexpensive maintenance.
- Meet new ventilation standards while reducing peak demand.
- Competitively priced.

BARRIERS TO ENTRY

AEP's initial product lines are protected by three patents that have issued, plus six more pending. This intellectual property is listed in detail in Appendix H. In addition to patent protection, a number of the innovative components in AEP's products would be difficult to reverse engineer. AEP will also benefit by its relationship with Davis Energy Group. DEG will continue to improve AEP's technologies and will develop other innovative technologies. In sum, AEP will be first to market, and will stay ahead of the market, through innovation complemented by exposure and marketing prowess.

[1] Detailed results are available in "Development of an Improved Two-Stage Evaporative Cooling System," prepared by Davis Energy Group for the California Energy Commission, March 2004. Publication number P500-04-016

[2] CP Price Sources: (1) www.WholeSaleAC.com, 7/29/04; (2) Davis Energy Group SBIR 1, Task 2, 2/27/04; (3) 2004 Construction Estimator, 7/29/04; (4) Slakey Bros. Distributors, 7/30/04; (5,6) Davis Energy Group SBIR 1, Task 2, 2/27/04; (7) Freus Factory, 7/29/04; (8,9) Beutler Corporation, 9/13/04; (10) ZONEX Systems, 9/20/04.

MARKETING PLAN

AEP's target markets for its products will be "green" builders, developers, contractors, owners and designers. Energy efficiency and indoor ventilation are key components of green design. Utilities are another critical constituency, because of their need to control peak demand. AEP will first seek utility support for its products – in the form of incentives and introductions to market players. AEP has already held promising meetings with the Sacramento Municipal Utility District (SMUD) regarding NightBreeze, and with Pacific Gas & Electric Company (PG&E) regarding OASys. PG&E now offers a $600 incentive for two-stage evaporative coolers, including OASys.

TARGET S:

- **Utilities**
- **Home Builders**
- **Schools**
- **Commercial Developers**
- **Govt Bldgs**
- **Contractors**
- **Green Designers**

With incentives in place, AEP will directly market to homebuilders and to building owners, managers, developers and their HVAC contractors. AEP will also target energy service companies regarding commercial products. AEP will sell directly to users and contractors and add distributors as sales build. This strategy will maximize AEP's margin and also recognizes that some distributors are reluctant to sell new technologies, disruptive products, products that require special explanation or those having a long selling cycle. Since AEP's mission is to commercialize cutting edge technologies and products, selling directly will be a key component to building sales volume quickly.

For all products, AEP will stay in touch with the general market by collecting market information on a continuing basis and doing targeted market research on a periodic basis. DEG will design specific marketing programs by product, and will design sales brochures, collateral literature, and displays with the assistance of professional copywriters and graphic designers. Operations and Maintenance Manuals as well as Installation Manuals will be maintained for all products on an ongoing basis. Davis Energy Group will assist in this effort. AEP will be a regular participant at key trade shows that reflect AEP's core values of sustainability and energy efficiency. A brief discussion of AEP marketing plans by product follows.

ZTE AND SMART VENT

The Zoned Thermal Equalizer (ZTE) and Smart Vent products are currently manufactured and sold by Residential Control Systems, Inc. (RCS) of Rancho Cordova, California.

The majority of residential construction in California is two-story. In northern California, Beutler installs over 5,000 ZTE systems annually. In southern California, two separate forced-air systems are frequently installed; one for upstairs and one for downstairs. Use of the ZTE reduces installed costs significantly by enabling one system to service both floors and maintain comfort. Consequently, there is a significant market opportunity to sell ZTE in southern California.

Similarly, Beutler currently installs approximately 3,000 Smart Vent systems annually in northern California. Although RCS sells Smart Vent and ZTE outside of northern California through distributors, its distributors are not actively promoting either product, particularly in

southern California. Southern California's climate and active construction market translates to a potential for high sales for both of these products there. In addition, marketing ZTE and Smart Vent to southern California production builders will put AEP in touch with that market in advance of its introduction of NightBreeze – Gas, generating early sales and paving the way for NightBreeze product introduction. Once NightBreeze – Gas is introduced, AEP plans to transition out of Smart Vent sales. The Zoned Thermal Equalizer, however, is a product that can be sold in conjunction with NightBreeze – Gas and other AEP products on a continuing basis.

NIGHTBREEZE – HYDRONIC

The inaugural market for NightBreeze – Hydronic is apartments and custom homes in low humidity climates. Initially, NightBreeze – Hydronic will be manufactured by El Dorado Precision Company of Jackson, California. Subsequent production by WaterFurnace at higher volumes is under discussion. NightBreeze – Hydronic is among initial products in the NightBreeze product line and includes a hydronic coil for heating. A refrigerant coil can be added to the system for air conditioning. (These are manufactured and supplied by other companies, not AEP.) AEP will approach California utilities regarding inclusion of NightBreeze – Hydronic in their incentive programs. SMUD has indicated an interest in doing so. WaterFurnace has indicated interest in selling NightBreeze Hydronic in the upper Mid-west.

NIGHTBREEZE – GAS

The market for NightBreeze – Gas is production homes in low humidity climates. NightBreeze – Gas integrates the NightBreeze system with a variable speed gas furnace. This product is approaching the end of its development cycle. AEP will identify a private-label manufacturer for the product. The Amana division of Goodman Manufacturing, LLC is a likely candidate for providing this service, as they are currently a participant in DEG's NightBreeze – Gas development project. While the private label manufacturer ultimately selected may also sell NightBreeze – Gas through its traditional distribution channels, AEP and its sales team will sell the system directly to production builders. NightBreeze – Gas is a strong candidate for inclusion in utility incentive programs. After a year of beta testing, marketing will start in California and then expand to other western states.

NIGHTBREEZE – HUMID

The humid climate version of NightBreeze couples NightBreeze – Gas, including a DX coil, with dehumidification hardware components. The market for this product is production homes in humid climates. This product is in an early stage of development. In July, 2004 DEG was awarded Phase II DOE/SBIR funding by the Department of Energy to complete its development. NightBreeze - Humid is on a two year development schedule, with completion targeted for second quarter, 2006.

NightBreeze – Humid will be manufactured and marketed by AEP in the same way as NightBreeze – Gas. It will be introduced after a year of beta testing and will then be marketed regionally in areas with humid climates. Between NightBreeze – Gas and NightBreeze – Humid, the market potential for this product line includes virtually the entire continental U.S. Because it can uniquely meet the comfort requirements of newly constructed homes in humid climate areas, the potential for the NightBreeze – Humid product line is large.

NIGHTBREEZE – PLUS

NightBreeze – Hybrid technology is currently in the concept stage. It marries NightBreeze ventilation cooling with indirect evaporative cooling, and potentially with refrigeration cooling. By using the cooling means with the least energy intensity capable of meeting the load at any given time, NightBreeze – Plus holds the potential to be the ultimate in efficient residential cooling and ventilation. DEG intends to propose this project for development funding in the future. AEP will participate in this process and will provide co-funding for development of NightBreeze – Plus. After its development, NightBreeze – Plus will be introduced in the typical manner in which AEP commercializes products and will serve as a follow-on product to the NightBreeze product line in future years.

NIGHTBREEZE – RETROFIT

The NightBreeze products now available or under development are designed for new construction. With some modification, retrofit versions can be developed. Once the new products take hold in the marketplace, AEP will contract with DEG to develop a retrofit version of NightBreeze designed to be added to a gas furnace system. NightBreeze – Retrofit will be marketed through distributors to the smaller HVAC contractors that service the residential market.

OASYS

DEG executed a Letter of Intent to license production of OASys technology to Speakman Company in April of 2003. The final licensing agreement is under negotiation. AEP intends to be a western distributor for OASys, selling the product to school districts, energy service companies, homebuilders and retrofit contractors.

IDEC^3

IDEC^3 is a three stage cooler envisioned by DEG. It includes IDEC technology with the addition of a compressor for the third stage of cooling. After successful market introduction of IDEC, DEG intends to propose IDEC^3 for development funding. Ultimately, it will be marketed in the same way as OASys. IDEC^3 extends the climate and market range of the basic two-stage product to the production home market.

HYCOOL

After development of HyCool, AEP will select a private-label manufacturer for this high efficiency retrofit product. HyCool is well suited for the retrofit market. Consequently, in addition to selling directly to homebuilders, HyCool will be sold through distributors to the retrofit market. Its potential in this market is particularly large, especially in the service territories of utilities that face peak demand challenges.

HYPAK

The first version of this high efficiency commercial rooftop HVAC unit has been designed and is ready for prototyping and beta testing. HyPak-OA is designed to condition and deliver 100% outside air. AEP's manufacturing partner for HyPak is Des Champs Technologies. After finalizing a manufacturing agreement partner, AEP will train its sales team to approach the commercial market with this innovative and very high efficiency product.

HyPak is an excellent candidate for utility incentives, as it significantly reduces demand during peak loads (40% or more). HyPak will be sold to building owners and managers, ESCOs, government agencies and HVAC contractors.

In June, 2004, DEG submitted a proposal to the Department of Energy for funding of development of HyPak – Mixed Air. In September, the company received notification that its proposal was selected and that $1.3 million of additional R&D funding had been awarded. While HyPak – OA more efficiently conditions ventilation air, HyPak – MA will target the much larger market for RTUs that condition both recirculated air and ventilation air. Because of its large energy savings potential, HyPak holds the promise of fast growth and volume when offered using the guaranteed savings or energy service company financial model. In this model, the cost of the product is largely or totally born by a financial entity that is then paid back through energy savings.

HYPAK - DUAL COOL

HyPak – DC marries some of the features of HyPak with a conventional RTU. HyPak – DC would be sold to building owners and managers, energy service companies, government agencies and contractors. HyPak – DC offers a good way for AEP to initiate marketing in the commercial buildings market if HyPak is not ready when AEP wants to expand into that market.

MARKETING ORGANIZATION

AEP is currently interviewing candidates for a key position – Director of Marketing and Sales. Candidates have 10 to 20 years experience marketing and selling residential and commercial HVAC equipment for manufacturers and distributors. Upon capitalization, this key position will be filled.

Early on, utilities will be approached to establish new incentives for AEP products, to include AEP products in existing incentive programs and to broaden and enhance incentives already in place for AEP's products. Salesmen and/or manufacturer's representatives will be hired for northern and southern California. Initial marketing and sales efforts will focus on northern and southern California, and will include:

- Construction of Web-site – providing product and purchase information
- PR and advertising through industry journals such as *Air Conditioning Refrigeration News*
- Displays at green building, design and builder shows and conventions
- Truck with products for exhibition to homebuilders, contractors and distributors
- Product rollout events, with key homebuilders and contractors invited
- Inserts in utility bills, as permitted
- CD for field presentations (with sizzle!)
- Warranty program
- Other marketing concepts from the Director of Marketing & Sales, AEP's Advisory Board and others

- Disruptive Products
- Reduce A/C Costs 30% to 90%
- Reduce Critical Peak Demand
- Green Technology
- Huge Market Potential

In Year 1, marketing efforts will focus on northern and

- Experienced Management
- Right Products
- Right Time

southern California. In Year 2, efforts will expand to northern Nevada, the Rocky Mountains (Colorado, Wyoming and north) and the Southwest (Arizona and New Mexico.) At the end of Year 2 or early in Year 3, with the introduction of NightBreeze – Humid the sales organization will expand into Texas, Oklahoma and Arkansas and WaterFurance International will be enlisted to market in the Mid-west and east. In Year 3 expansion will continue eastward (Kansas, Nebraska, Iowa and Missouri), and subsequently into the rest of the U.S. Starting late in Year 2, AEP will begin to market internationally. WaterFurnace has distribution established in Australia, Asia, and Europe. AEP will work with WFI and others to market abroad and eventually manufacture in stronger overseas markets.

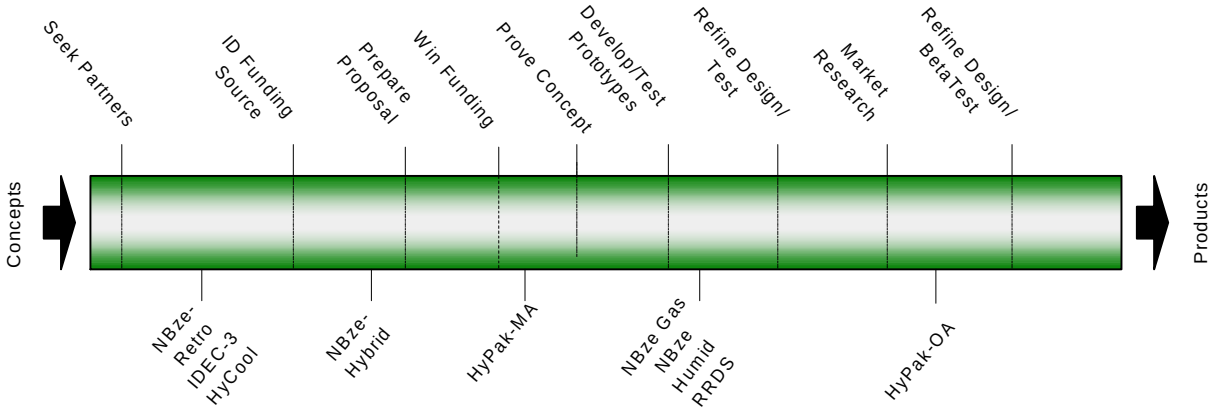
OPERATIONS AND STRATEGY

AEP – DEG RELATIONSHIP

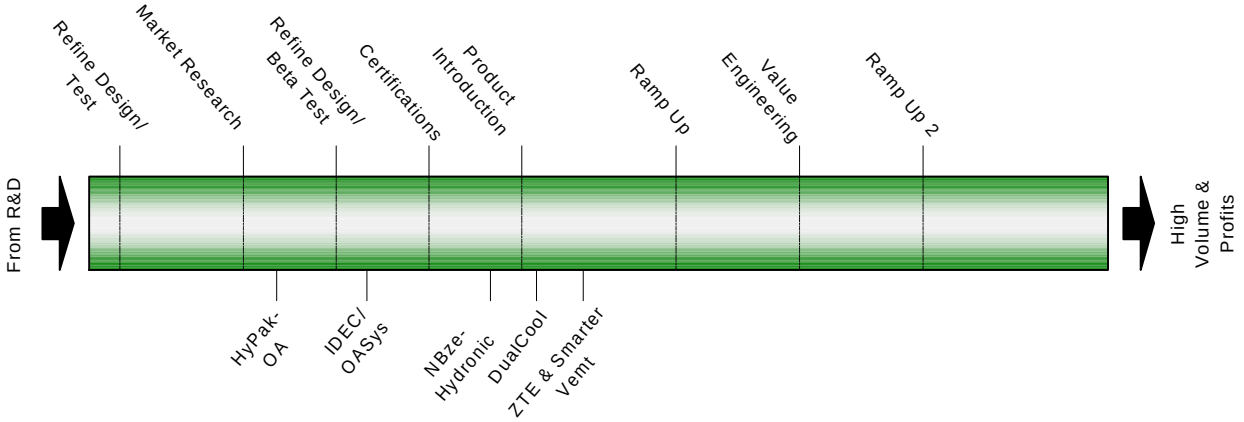
AEP is a commercialization and marketing company. Its mission is to introduce disruptive and innovative energy efficient products to the marketplace, and profitably build their sales volume. Manufacturing will be outsourced.

AEP was created by Davis Energy Group's three principals to commercialize market disruptive, proprietary products developed by DEG and others. DEG and AEP will continue to work together to develop, beta-test and commercialize innovative combined heating and cooling products.

DEG Product Development Pipeline



AEP Product Commercialization Pipeline



As an engineering and R&D firm, DEG fosters a creative environment with a minimum of hierarchy. Its expertise is in mechanical design and analysis, not marketing. AEP was founded to build an expert, disciplined marketing organization focused on commercialization, sales and profitability.

Because of the differences in mission and culture, it makes most sense for the two entities to be separate. In fact, DEG and AEP should not be separate divisions of one company. DEG has been successful in securing government grants to develop private technologies. This success is due in

part to DEG's professional objectivity, which would be compromised if it were part of a company marketing specific products.

Working side-by-side as independent partners, DEG and AEP will form a bridge between technology development and the commercial market. DEG will maintain its up-to-date knowledge of technical advancements across the industry, continuing to secure energy analysis, technology demonstration, and monitoring consulting projects. AEP will benefit by receiving early knowledge about cutting edge energy efficiency technologies – just as DEG will benefit by receiving real time market feedback from AEP.

To secure this bridge, there will be some overlap in AEP and DEG management. Mark Berman will be the full-time President of AEP, and will also remain on the DEG Board of Directors and its management committee. At least one of DEG's other principals will remain on the AEP Board of Directors. Other cross-fertilization will take place at lower levels as appropriate, maximizing the synergy between the two companies.

AEP and DEG have entered into a strategic partnership. DEG has granted AEP first right on all DEG proprietary products now available and developed in the future. This close relationship provides AEP with a continual supply of innovative products and provides DEG with an outlet for its product development efforts. The up-front fee common in licensing relationships has been waived by DEG. AEP has agreed to pay DEG a royalty of 3% to 4% on all products sold subject to the partnership. DEG will be available to analyze and resolve problems that arise in the field, improve products, and design additional versions. AEP will provide DEG with valuable market feedback regarding product needs, problems and marketability.

DEG's ability to include AEP as a commercialization partner will help DEG win additional government funding for product development work. When selecting among grant proposals, both the Department of Energy and California Energy Commission place a high priority on the likelihood of product development projects leading to commercial products.

OTHER STRATEGIC RELATIONSHIPS

In addition to its strategic partnership with Davis Energy Group, AEP is building strategic relationships with two HVAC equipment manufacturers, a control supplier and the largest HVAC contractor in California. These relationships are largely the outgrowth of prior with Davis Energy Group projects.

WaterFurnace International

WaterFurnace International (WFI) is a $50 million/year manufacturer of high quality heating and cooling equipment. Based in Fort Wayne, Indiana, the company (symbol WFI) and is traded on the Toronto Stock Exchange. Its primary products are geothermal heat pumps, which provide both heating and cooling without the use of natural gas. WFI distribution and sales are strong in the Midwest and east, but not in the west or southwest. They also have distribution in Europe, Asia and Australia.

The strategic alliance between WFI, AEP and DEG calls for Davis Energy Group and WaterFurnace to co-develop products that will be manufactured by WFI for AEP and/or for its own account. AEP will market WFI products in the west and southwest as appropriate, and WFI will market AEP products in the Midwest, the east, Europe, Asia and Australia as appropriate. Specific terms will be worked out on a product by product basis. WFI's President and CEO, Bruce Ritchey, has agreed to be on AEP's advisory board.

Speakman Company

Founded in 1869, Speakman Company is a privately held manufacturer of plumbing fixtures and eye safety equipment. Speakman has pioneered technologies ranging from the original shower head to modern touchless faucets and electronically controlled thermostatic mixing valves. Annual sales exceed $20 million, and products include quality fittings, electronic faucets, showerheads and emergency equipment. The company is based in Wilmington, Delaware.

Speakman has recently created Speakman CRS, a new division devoted to manufacturing and marketing clean, renewable and sustainable technologies in high natural growth potential markets. Speakman CRS approached DEG with an interest in advanced evaporative cooling and DEG's IDEC technology. Under the terms established in a letter of intent signed in 2003, DEG intends to license its IDEC technology to Speakman (it will be marketed as OASys, for Outdoor Air System) for U.S. manufacturing. DEG and Speakman expect to sign a licensing agreement that codifies these terms 4Q2004. AEP will be included as an OASys distributor in the west.

Des Champs Technologies

Des Champs Technologies (DCT) is a private manufacturer of high quality engineered, customized cooling and heating equipment. DCT primarily serves the commercial market. The company is based in Natural Bridge, Virginia, approximately 40 miles from Roanoke. Founded in 1973 by Nicholas H. Des Champs, Ph.D., the company remains privately held. DCT manufactures industrial and commercial heat exchangers, residential and light commercial ventilation systems, and multi-stage engineered commercial HVAC systems. Annual sales are approximately $35 million dollars.

DCT is a pioneer in the field of evaporative cooling features. DEG and DCT have worked together on the development of HyPak since 2000. The relationship between DCT, AEP, and DEG calls for DEG and DCT to continue the development of the HyPak product line and for DCT to manufacture HyPak for AEP. DCT will also market HyPak in coordination with AEP, and AEP will market DCT products as appropriate. A development agreement has been signed between DCT and DEG. Manufacturing and marketing specifics between DCT and AEP will be negotiated in early 2005.

Residential Control Systems

RCS is a private developer, manufacturer and marketer of controls for heating and cooling equipment. The company is based in Rancho Cordova, California. DEG has been working very closely with RCS on the development of the NightBreeze product line. RCS also assembles and sells Smart Vent, the Zone Thermal Equalizer, thermostats and other controllers. RCS and AEP have reached an agreement in principle for AEP to market both Smart Vent and ZTE in southern California and other western states.

Beutler

Beutler Corporation is the largest HVAC contractor in California and the second largest in the US, with sales exceeding $130 million dollars per year. The company is privately held and based in Sacramento, California. Beutlers' primary business is the installation of HVAC systems in new production homes in northern California. Their market share of new home builders in the Sacramento region exceeds 60%. Beutler very effectively markets Smart Vent and the Zone Thermal Equalizer as up grades through its builder clients. Beutler developed the concepts for both and manufactures the damper component for these products, supplying them to RCS.

Beutler is considering using NightBreeze firmware on all its Smart Vent installations. In that case, Beulter has agreed to pay DEG a royalty of $15 per unit. Likewise, AEP has agreed (through DEG) to pay $15 per unit for Smart Vent units it sells outside of northern California using controller hardware developed by RCS with funding from Beutler. Rick Wylie, the CEO of Beutler Corporation, has agreed to be on the AEP's advisory board. Beutler will play an instrumental role in introducing AEP to key homebuilders and mechanical contractors in southern California and elsewhere.

OUTSOURCE MANUFACTURING

NightBreeze – Hydronic

Initially, El Dorado Precision (EDP) of Jackson, California will fabricate NightBreeze – Hydronic. EDP is a sheet-metal shop with a reputation for quality workmanship. In business since 1997, they do metal fabrication for the electronics, HVAC and RV industries. Under the direction of proprietor Barry Prock, EDP has fabricated 15 NightBreeze – Hydronic units to date, with excellent results. EDP has the capacity to assemble up to 60 NightBreeze – Hydronic units per month, and has agreed to inventory the initial runs until sold.

As NightBreeze – Hydronic unit volume surpasses 50 units per month, and as sales in the mid-west through WaterFurnace International (WFI) grow, AEP will shift an increasing portion of NightBreeze – Hydronic production to WFI. WFI has excess production capacity and is well positioned to manufacture and market residential products for AEP.

OASys

Speakman Company's new 80,000 s.f. headquarters facility was built in 2003.The company is well positioned to assemble and market OASys 2-stage evaporative coolers and quickly ramp up volume. AEP will distribute OASys in the western states.

HyPak

Des Champs Technologies has been sub-contractor to Davis Energy Group for the development of HyPak through DEG's contract with the U.S. Department of Energy. DCT's experience with direct and indirect evaporative cooling technologies, as well as commercial rooftop units, makes DCT an ideal company to manufacture HyPak in its 431,000 s.f. factory in Buena Vista, Virginia.

QUALITY AND TIMELINESS

On-time delivery and product reliability are critical to AEP success. AEP will quickly develop quality control protocols and inventory management procedures for its manufacturers to follow. Both QC systems and inventory management systems will be computerized and integrated into AEP's IT systems. Given the excess manufacturing capacity of its partners, the company foresees little difficulty in ramping up volumes to meet growing demand in a timely manner.

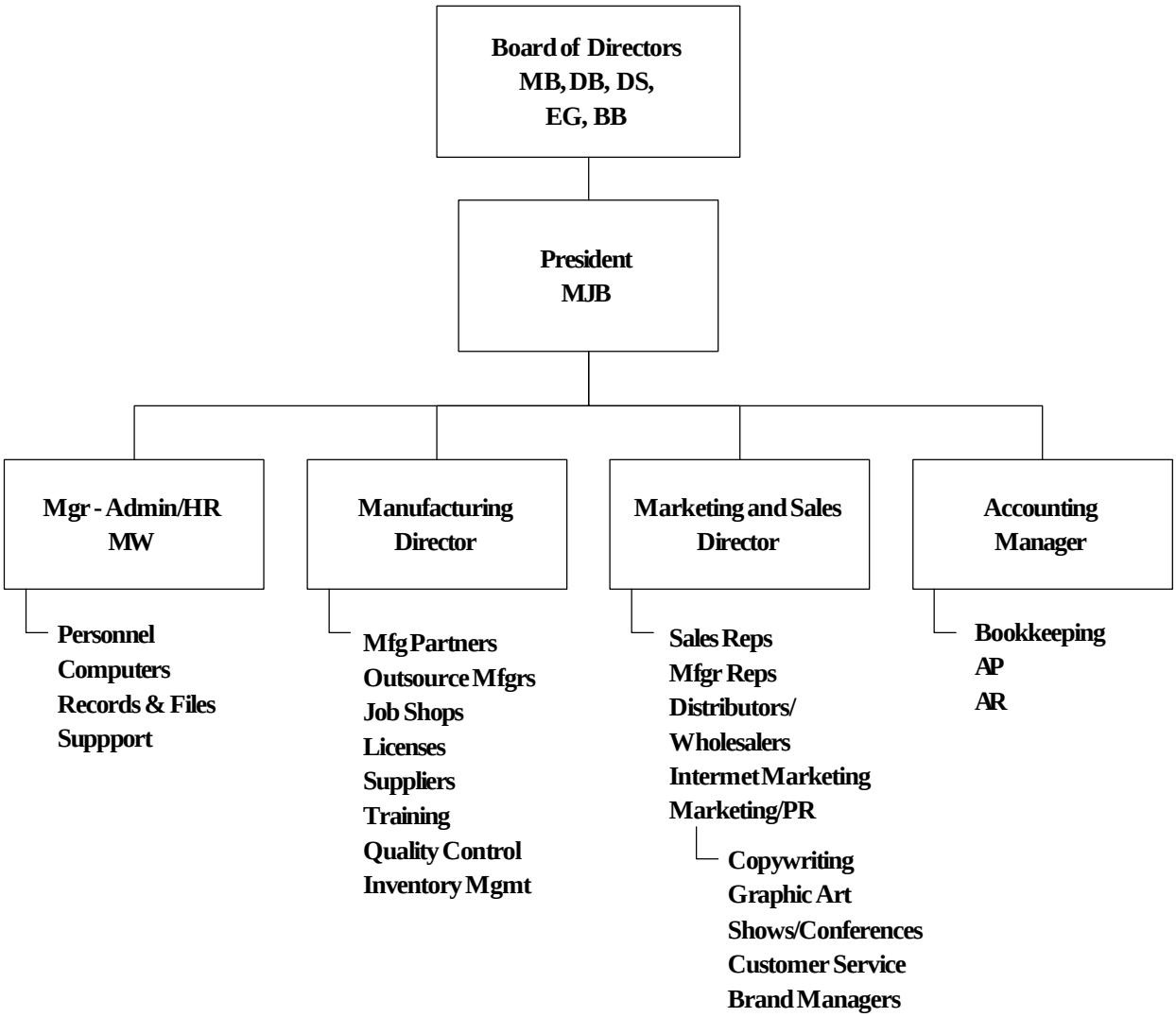
LEGAL

AEP has nondisclosure agreements (NDAs) in place with all of its partners. A strategic alliance agreement has been executed with WFI, a preliminary license agreement has been executed with Speakman Company, and a subcontract for development of HyPak has been executed with Des Champs Technologies. Neither Advanced Energy Products nor Davis Energy Group is subject to any lawsuits as of the date of this writing (October 1, 2004).

Intellectual property in the form of patents and trademarks is held and/or is pending for all product lines to be marketed by AEP. DEG holds patents for most planned AEP product lines. A complete list of intellectual properties is included in Appendix H *(AEP/DEG Intellectual Property)*.

PERSONNEL AND STAFFING

AEP's functional organization chart is shown below:



Areas of responsibility are listed for each of four key management areas: Marketing and Sales, Manufacturing, Administration, and Accounting. Headcount is projected to grow from 9 in Year 1 to 160 in Year 5, per the table below.

	Administration					Marketing/Sales							
Year End	**CEO**	*Mgr*	*Assts.*	*HR*	*Computers*	*Director*	*Reps*	*Acct. Mgrs.*	*Sales Assts.*	*Sustainibility Coord*	*Govt/ Utility Coord*	*PR*	*Website*
2005	1	1	1			1	2		1				
2006	1	1	3		1	1	4	1	2	1	1		
2007	1	1	5	1	1	1	6	1	4	1	2		
2008	1	1	10	1	2	1	17	3	11	1	3	1	1
2009	1	1	15	2	3	1	25	5	15	2	4	1	2

	Outsource Manufacturing					Accounting					
Year End	*Director*	*Prod. Manuf. Engrs*	*Trainers*	*Techs*	*Tech Assts/ Assmblrs*	*Mgrs/ Controller*	*Acct.*	*AR/AP*	**Head Count**	**Avg Cost Per Person/Payroll**	**Revenue Per Employee**
2005	1						1		**9**	x$100K=$900K	$126K
2006	1	0	2	1			1	1	**22**	x$90K=$1,980K	$276K
2007	1	1	4	3	1	1	2	3	**40**	x$80K=$3,200K	$514K
2008	1	2	10	20	5	1	3	5	**100**	x$70K=$7,000K	$580K
2009	1	4	15	25	20	1	5	12	**160**	x$60K=$9,600K	$767K

To help ensure selection of the most suitable personnel, capability and personality evaluation tools such as the Prandex Predictive Index will be used. Initially developed for the U.S. Army, this statistically based system is an excellent tool for matching job needs with peoples' innate capabilities.

AEP's professional staff will be designed to create a company with the following capabilities by the end of Year 2.

AEP Portrait of Capabilities – 2007

Who we are

- Primary source for grEEn HVAC products
  - The first place residential builders, commercial developers and design professionals go to find green, sustainably designed and energy efficient heating, ventilation and cooling equipment
  - Well known in sustainable development circles

General

- Capable of responding to market changes that favor AEP products
  - Able to reinvent the organization as needed to support rapid growth
  - AEP organization will enable growth, not impede it
  - Forward and strategic planning will keep AEP prepared for events

Marketing

- Outstanding capability to commercialize innovative, well designed HVAC products
- Responsive to the marketplace
  - Entergetic sales team that responds to questions thoughtfully, truthfully, professionally and promptly (T^2 P^2!)
  - Distribution network that delivers the right products, on-time

Sales

- Profitable, with growing volume, and ready to handle fast ramp-up.

Manufacturing

- Oversee the fabrication of high quality, highly reliable "bullet proof" products
  - Delivered on time
- Continually seek and implement quality enhancements and cost-cutting strategies

Team

- Flexible and motivated
  - Excellent communications – internal and external – a hallmark of the company
- Salesmen, field personnel, distributors and subcontractors talk with each other and with product developers and engineers to:
  - Continuously improve products
  - Resolve problems
  - Create new products that meet real needs
- Personnel Philosophy: Team oriented, value truth and integrity, award results, and enjoy the process
  - Positive reinforcement

FINANCIAL PROJECTIONS

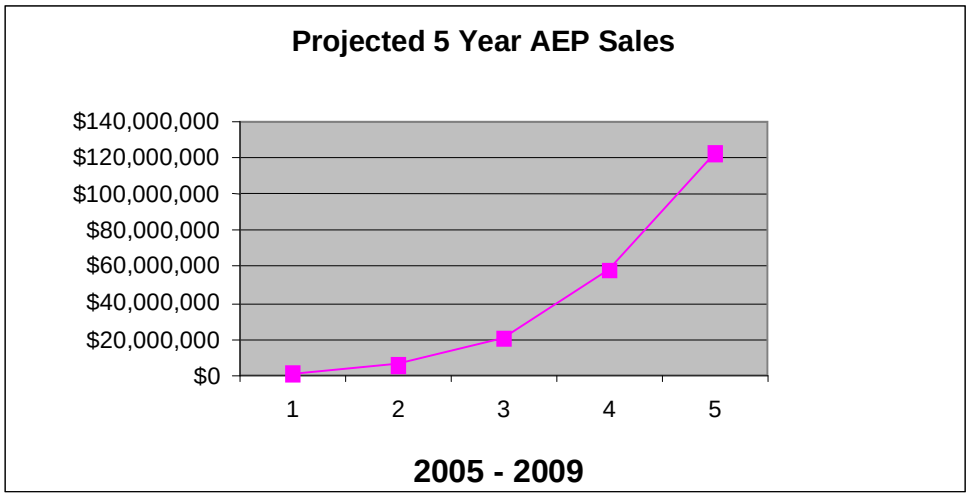
SALES

AEP's initial products will be the Zone Thermal Equalizer (ZTE), Smart Vent, NightBreeze – Hydronic and OASys (IDEC). Product roll-outs are scheduled for 2Q and 3Q04. HyPak – Outside Air will commence sales late in 3Q04. ZTE and Smart Vent will be sold in southern California and northern Nevada in Year 1. NightBreeze – Hydronic, OASys and HyPak – OA will be sold throughout California. Year 1 sales are projected at $1,135,500. See Figure 7-1 below *Projected 5 Year AEP Sales*, for sales projections by product for Year 1-5

In Year 2, NightBreeze – Gas, NightBreeze – Humid, and NightBreeze – Retrofit will be added to the product line. In Year 3, IDEC[3] (OASys with a small compressor) and HyPak – Mixed Air will be introduced, and the sales team and marketing efforts will expand into the Rockies, the Southwest, and the Mid-west. Year 2 sales are projected at approximately $6 million growing to $20 million dollars in Year 3. Other products will be added to the product line as opportunities arise via representation agreements, as a result of product development by DEG, and/or through acquisition.

In Years 4 and 5, NightBreeze – Hybrid (with an indirect cooling stage), and the HyCool evaporative condenser will be introduced. AEP's sales presence will grow into the Southeast, and sales are projected to reach $58 million and $122 million dollars respectively. This rapid growth will be fostered by increasing electricity prices, pressures to cut growth in peak demand, the growing reputation of AEP's products, and its marketing prowess.

Figure: 7-1 Sales Graph



Breakthrough products in the HVAC market have achieved such growth in the past. For example, Copeland introduced its scroll compressor in the mid-1980's. This technology offered significant performance and efficiency benefits when compared to its predecessors, and now enjoys over 50% market share. According to a study completed by Arthur D. Little in 1995 for the U.S. Department of Energy, technologies with a one year payback achieve 20% market share

within 5 years and ultimate adoption of 60% within 10 to 20 years after introduction. Technologies with two year paybacks achieved 7% and 30% market share in these timeframes, respectively. Given the striking energy savings offered by AEP's products, and the potential for quick paybacks, rapid growth appears quite possible, particularly in a climate of rising energy prices. See Appendix I, entitled *Financial Projections – Assumptions*, for more detail about the assumptions underlying sales projections.

Figure: 7-3 Detailed 5 Year Sales Projections

PROJECTED SALES REVENUE - 2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Residential													
ZTE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,850	$ 5,775	$ 7,700	$ 11,550	$ 15,400	$ 44,275
SmartVent	-	-	-	-	-	-	-	10,250	15,375	20,500	30,750	41,000	117,875
Nbze-Hydronic	-	-	-	-	14,250	19,950	28,500	42,750	57,000	57,000	71,250	82,650	373,350
Nbze-Gas	-	-	-	-	-	-	-	-	-	-	-	-	-
Nbze-Humid	-	-	-	-	-	-	-	-	-	-	-	-	-
Nbze-Hybrid	-	-	-	-	-	-	-	-	-	-	-	-	-
Nbze-Retrofit	-	-	-	-	-	-	-	-	-	-	-	-	-
IDEC	-	-	-	-	-	-	19,000	38,000	57,000	76,000	95,000	95,000	380,000
IDEC3	-	-	-	-	-	-	-	-	-	-	-	-	-
HyCool	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Residential	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Residential	0	0	0	0	$ 14,250	$ 19,950	$ 47,500	$ 94,850	$135,150	$161,200	$208,550	$234,050	$ 915,500
Commercial													
Hypak-OA	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ 50,000	$ 70,000	$ 70,000	$ 220,000
Hypak-MA	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Commercial	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Commercial	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ 50,000	$ 70,000	$ 70,000	$ 220,000
Total	$ -	$ -	$ -	$ -	$ 14,250	$ 19,950	$ 47,500	$ 94,850	$165,150	$211,200	$278,550	$304,050	$1,135,500

	PROJECTED SALES REVENUE - 2006					PROJECTED SALES REVENUE - 2007				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
Residential										
ZTE	$ 46,200	$ 69,300	$ 92,400	$ 107,800	$ 315,700	$ 115,500	$ 130,900	$ 146,300	$ 161,700	$ 554,400
SmartVent	123,000	184,500	246,000	287,000	840,500	-	-	-	-	-
Nbze-Hydronic	256,500	300,000	450,000	500,000	1,506,500	625,000	540,000	600,000	660,000	2,425,000
Nbze-Gas	-	-	-	75,000	75,000	150,000	300,000	500,000	1,000,000	1,950,000
Nbze-Humid	-	-	-	-	-	-	-	180,000	270,000	450,000
Nbze-Hybrid	-	-	-	-	-	-	-	-	-	-
Nbze-Retrofit	-	-	-	72,500	72,500	145,000	217,500	260,000	357,500	980,000
IDEC	114,000	152,000	272,000	442,000	980,000	510,000	612,000	690,000	840,000	2,652,000
IDEC3	-	-	-	-	-	-	-	198,000	297,000	495,000
HyCool	-	-	-	-	-	-	-	-	-	-
Other Residential	-	-	-	-	-	-	-	20,000	40,000	60,000
Total Residential	539,700	705,800	1,060,400	1,484,300	3,790,200	1,545,500	1,800,400	2,594,300	3,626,200	9,566,400
Commercial										
Hypak-OA	$ 200,000	$ 200,000	$ 255,000	$ 340,000	$ 995,000	$ 425,000	$ 510,000	$ 490,000	$ 560,000	$ 1,985,000
Hypak-MA	-	-	-	-	-	-	-	520,000	780,000	1,300,000
Other Commercial	-	-	-	-	-	50,000	100,000	200,000	300,000	650,000
Total Commercial	$ 200,000	$ 200,000	$ 255,000	$ 340,000	$ 995,000	$ 475,000	$ 610,000	$ 1,210,000	$ 1,640,000	$ 3,935,000
Total	$ 739,700	$ 905,800	$1,315,400	$1,824,300	$4,785,200	$ 2,020,500	$ 2,410,400	$ 3,804,300	$ 5,266,200	$ 13,501,400

	PROJECTED SALES REVENUE - 2008					PROJECTED SALES REVENUE - 2009				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
Residential										
ZTE	$ 169,400	$ 184,800	$ 200,200	$ 215,600	$ 770,000	$ 223,300	$ 238,700	$ 246,400	$ 254,100	$ 962,500
SmartVent	-	-	-	-	-	-	-	-	-	-
Nbze-Hydronic	800,000	960,000	1,040,000	1,120,000	3,920,000	1,200,000	1,500,000	1,700,000	2,000,000	6,400,000
Nbze-Gas	1,500,000	1,750,000	1,600,000	1,800,000	6,650,000	2,200,000	2,600,000	3,000,000	3,200,000	11,000,000
Nbze-Humid	450,000	810,000	1,200,000	1,600,000	4,060,000	2,000,000	2,800,000	2,800,000	3,500,000	11,100,000
Nbze-Hybrid	-	-	-	-	-	244,800	367,200	489,600	530,400	1,632,000
Nbze-Retrofit	487,500	754,000	816,000	960,000	3,017,500	1,080,000	1,320,000	1,680,000	1,920,000	6,000,000
IDEC	1,050,000	1,440,000	1,560,000	1,680,000	5,730,000	1,450,000	1,550,000	1,600,000	1,650,000	6,250,000
IDEC3	495,000	940,500	1,176,000	1,302,000	3,913,500	2,436,000	2,604,000	2,112,000	2,178,000	9,330,000
HyCool	12,600	25,200	50,400	63,000	151,200	63,000	105,000	147,000	210,000	525,000
Other Residential	40,000	60,000	120,000	240,000	460,000	500,000	800,000	1,600,000	2,200,000	5,100,000
Total Residential	5,004,500	6,924,500	7,762,600	8,980,600	28,672,200	11,397,100	13,884,900	15,375,000	17,642,500	58,299,500
Commercial										
Hypak-OA	$ 700,000	$ 840,000	$ 910,000	$ 1,050,000	$ 3,500,000	$ 1,190,000	$ 1,330,000	$ 1,470,000	$ 1,610,000	$ 5,600,000
Hypak-MA	1,040,000	1,950,000	3,450,000	6,900,000	13,340,000	8,050,000	10,350,000	11,000,000	13,000,000	42,400,000
Other Commercial	400,000	500,000	600,000	700,000	2,200,000	1,000,000	1,100,000	1,200,000	1,300,000	4,600,000
Total Commercial	$ 2,140,000	$ 3,290,000	$ 4,960,000	$ 8,650,000	$19,040,000	$ 10,240,000	$ 12,780,000	$ 13,670,000	$ 15,910,000	$ 52,600,000
Total	$ 7,144,500	$10,214,500	$12,722,600	$17,630,600	$47,712,200	$ 21,637,100	$ 26,664,900	$ 29,045,000	$ 33,552,500	$110,899,500

CRITICAL RISKS: INTERNAL
The critical internal risks to AEP's sales and success are: 1. Poor quality control and/or designs resulting in unreliable product; and 2. Management barriers leading to problems in marketing, inventory control, accounting or overall company performance.

To guard against quality control problems, AEP will hire an experienced Manufacturing Director. The primary function of the Manufacturing Director will be to maintain good relationships with AEP's manufacturing partners and to maintain control of the quality of the products fabricated. Quality Control functions will include the design and execution of QC programs and the analyses and resolution of products problems encountered in the field. Maintaining beneficial communications between manufacturing supervisors, line workers, installers and end users will be critical to the success of this function. AEP management will watch closely to be sure that positive communications are maintained and that this function is performed satisfactorily. Management will not hesitate to make personnel or other changes when needed.

Management of AEP's marketing and sales, administration, and accounting functions will be equally critical. Again, personnel with experience in these areas will be hired. AEP will offer ample compensation packages to attract top talent. Professional development will be encouraged so that all employees maintain their edge. Outside consultants will be used whenever appropriate to bring in needed expertise and perspective. A healthy atmosphere of open, truthful, considerate communications will be maintained so that problems are recognized early and solved by the team. Early proclamation of problems will be encouraged as will team resolution – as opposed to an atmosphere where "The messenger gets shot" and "The lone ranger" who fixes a problem single-handedly is rewarded.

CRITICAL RISKS: EXTERNAL
The external critical risks to AEP's sales and success include a drop or slow growth in energy prices, and the introduction of competing products with similar advantages to those of AEP. Regarding competing products, AEP's insurance is its alliance with Davis Energy Group. Through its consulting work, Davis Energy Group can provide early warning of competitive product threats. AEP management will respond realistically – seeking to acquire the competing technology, surpass its performance, and/or out-market it. Awareness is the best antidote.

Falling or slow-growing energy prices will adversely impact AEPs growth. In this case, AEP will seek to aggressively cut its costs and offer superior products, but not as superior, for very low cost increments. If energy prices rise too rapidly, a new firm could be overwhelmed with orders and find itself unable to perform. AEP is specifically organizing to respond quickly to such an event. Contingency plans will be in place and sources of consulting and other assistance identified for rapid response to such opportunities. Rapid growth in AEP's markets will also open the possibility of an early sale of the company to a large, public competitor.

PRODUCT PRICING AND COST OF GOODS SOLD
Costs and prices of AEP's products are summarized in the tab entitled AEP Price/Cost Assumptions of the financial projections. Initial costs and prices reflect the lower volumes and

higher costs associated with new products. Mature costs and prices take into account the economies of scale available when volume reaches mature product levels. Most of AEP's products will start with initial costing and pricing and move to mature costing and pricing over time. Sources for cost and price estimates are as follows:

Table: 7-1

Product	**Costing Source, Price Assumptions**
NightBreeze – Hydronic	El Dorado Precision quote, 50% margin, x 70% for mature
NightBreeze – Gas	Beutler/DEG cost estimates, 55% margin, x 66% for mature
NightBreeze – Humid	DEG cost estimate, 55% margin, x 89% for mature
NightBreeze – Hybrid	DEG cost estimate, 58% margin
NightBreeze – Retrofit	DEG cost estimate, 52% margin, x 80% for mature
OASys	DEG cost estimate, 38% margin, x 66% for mature
IDEC[3]	DEG cost estimate, 38% margin, x 66% for mature
HyCool	DEG cost estimate, 58 – 60% margin, x 70% for mature
HyPak – OA	DCT/DEG cost estimates, 40 - 47% margin, x 62% for mature
HyPak – MA	DCT/DEG cost estimates, 38 - 50% margin, x 62% for mature
ZTE	RCS quote, 60% , margin (already mature)
Smart Vent	RCS quote, 50% , margin (already mature)

In general, margins approaching 50% are assumed. In cases where there is known to be considerable price competition, such as in rooftop units competing against HyPak, lower margins were assumed. In general, costs were assumed to drop by about one-third when mature volumes were reached. Greater cost decreases were included for particularly innovative designs (HyPak), and less for products that won't reach mature volumes during the first five years of AEP's business (NightBreeze – Humid and Hybrid). In the case of NightBreeze – Retrofit, key components will be at mature volumes when the product is introduced, reducing the opportunity to cut costs.

OVERHEAD EXPENSES

Projected start-up overhead expenses are shown on the tab labeled Overhead Expenses of the financial projections. Totaling $157,000, some of these expenses are being incurred prior to Year 1 and are being advanced by Davis Energy Group. DEG will be reimbursed upon start-up, and the remainder of the expenses will be incurred in Year 1. In addition, DEG will be reimbursed for personnel and other expenses directly associated with the start-up of AEP. These are estimated at $70,000. (See Use of Proceeds Section.) Consequently, all start-up overhead expenses are included in the Year 1 projections.

Year 1 overhead expenses (other than start-up), were estimated based upon DEG's experience and expenses incurred by other similar companies. In future years, some overhead expenses were estimated to grow based upon growth in revenue, less a decrement for productivity growth (for example, accounting). Other expenses were projected to grow with head count (for example,

supplies). Other G&A expenses were projected to increase based upon other factors (for example, computers). See Appendix I entitled *Financial Projections – Assumptions* for more details.

PROFITABILITY

Year 1 is an intensive start-up year, with a projected loss of $901,338. Sales begin to drive the financials in Year 2, with break-even projected in the fourth quarter and the full year loss dropping to $438,380. Thereafter, profitability grows, yielding EBITDA of $1.54 million in Year 3, $9.37 million in Year 4 and over $25 million in Year 5. Rapid growth in sales and profitability will make AEP an attractive candidate for merger, acquisition or IPO once EBITDA exceeds $25 million dollars.

USE OF PROCEEDS

AEP's business plan calls for an equity investment of $6.5 million dollars. These proceeds will be applied as follows:

Use of Proceeds
(000$)

Projected Deficits		$1,350
Capital Expenditures (Tooling)		
HyPak – OA	750	
NightBreeze – Gas	500	
NightBreeze – Retrofit	250	
NightBreeze – Humid	750	
Total Capital Expenditures		$3,250
Working Capital		$ 500
Other		
Start-up Reimbursements	70	
Furniture & Fixtures (thru Yr.2)	255	
Product Development - 1 Time	500	
Warranty Reserve	250	
Cost of Funds	325	
Total Other		$1,400
Total		**$6,500**

These funds are projected to be expended on the following schedule:

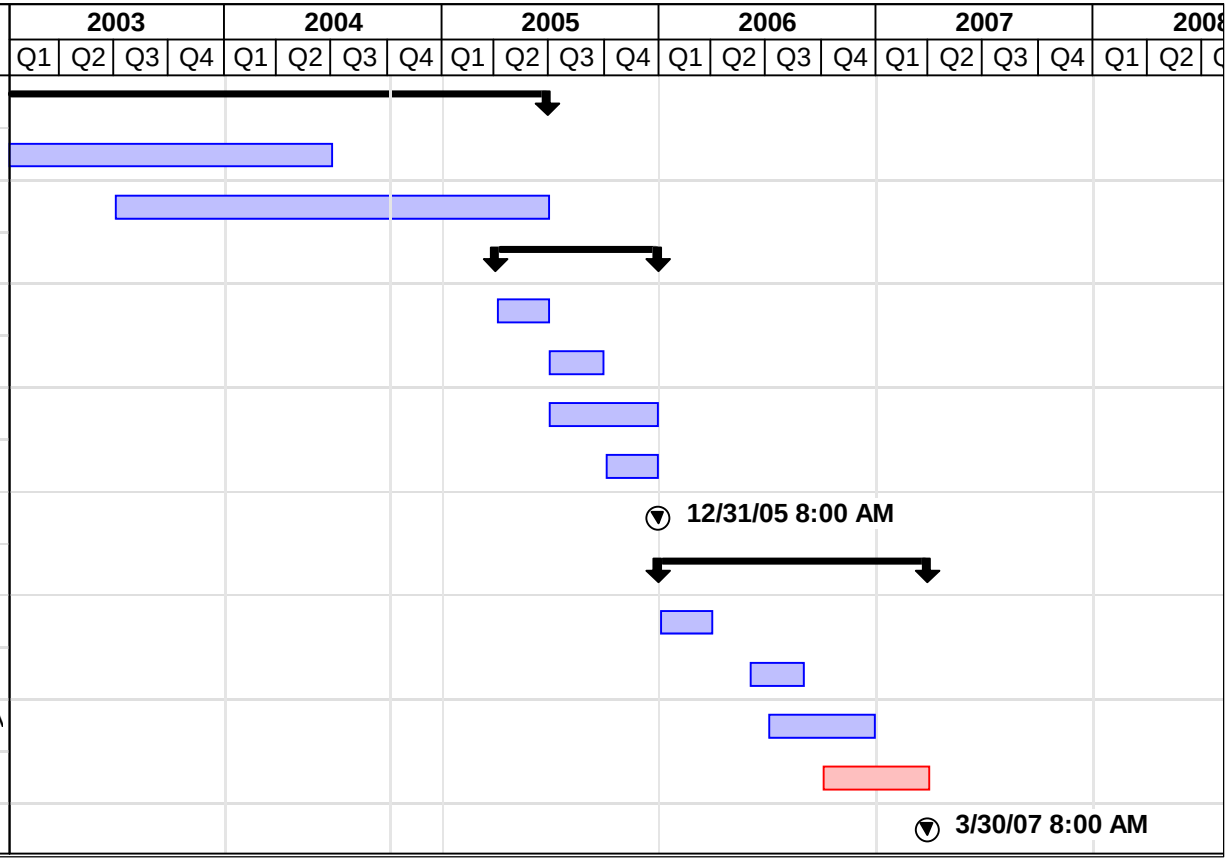
Use of Proceeds Schedule
(000$)

	Jan Yr1	Feb Yr1	2Q Yr1	1Q Yr2	3Q Yr2	1&2Q Yr3	Deficits	Total
Projected deficits (through 3Qyr2)							$1,350	$1,350
Capital Expenditures – Tooling								
HyPak – OA			750					
NightBreeze – Gas					500			
NightBreeze – Retrofit					250			
NightBreeze – Humid						750		
HyPak – MA						1,000		
Total Cap x			750		750	1,750	1,350	$3,250
Working Capital	500							$500
Other								
Start-Up Reimbursements	70							
Furniture & Fixtures	55	100		100				
Product Development		200		100		200		
Warranty Reserves	250							
Cost of funds	325							
Total Other	700	300		200		200		$1,400
TOTAL	**$1,200**	**$300**	**$750**	**$200**	**$750**	**$1,950**	**$1,350**	**$6,500**

The milestones associated with these expenditures are shown on the Gantt Chart below.

AEP Milestones

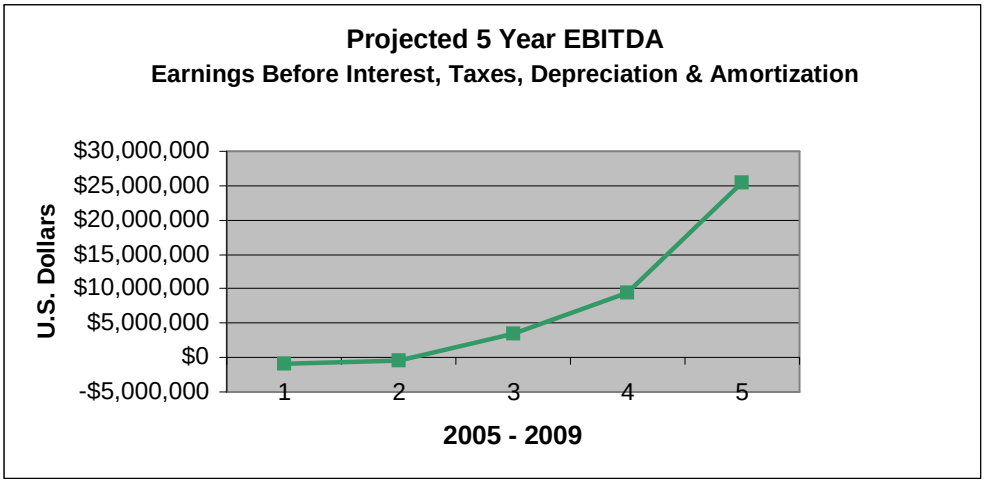
ID	Task Name
1	**Ph 1 NBZE, OASys, HyPak**
2	Develop/prototype
3	Beta test sales
4	**Ph 2 Launch**
5	Launch NBZE, OASys
6	Launch HyPak
7	Develop NBZE retro/gas
8	Sales - 3 production builders
9	**$3.5 mil investment to date**
10	**Ph 3 Expand**
11	Launch NBZE Retro, Gas
12	Launch NBZE Humid
13	Prototype & beta test HyPak-MA
14	Launch HyPak MA
15	**$6.5 mil investment to date**



RESULTS AND EXIT

Deficits total approximately $1.35 million through 3Q Year 2. The company is then projected to turn profitable. See Figure 7-2 for AEP's projected EBITDA for Years 1-5. Estimates for capital expenditures reflect tooling and related costs to establish outsourced manufacturing for the company's products. Working capital needs are based upon projected accounts receivable, accounts payable and float. Other costs include start-up reimbursements, furniture and fixtures (through profitability), and the cost of funds.

Figure: 7-2 EBITDA Graph



Product development costs of $500,000 are included to cover AEP's share of product development cost contributions on government funded projects, as well as unfunded product development. For example, NightBreeze – Retrofit will cost approximately $100,000 to develop, and is not likely eligible for government funding since it will be a follow-on product to previously commercialized products. If government funding is not received for development of NightBreeze – Hybrid, IDEC[3] or HyCool, product development costs could increase.

The warranty reserve of $250,000 will assure rapid response to product defects not identified prior to sales and installation. It is critical that AEP be prepared to respond rapidly to any product problems. Thereby building its reputation as a responsive provider of reliable, quality products. If these funds are not needed for warranty work, they will be available for additional product development.

With the proposed use of proceeds, AEP projects achieving EBITDA exceeding $25 million in approximately 5 years, generating an after tax (35% rate) valuation (15:1 PE) of $244 million.(65x$25 million x15) with one-third of the equity valued at $81 million, or approximately 12.5 times the original investment of $6.5 million. Thus the investor's $6.5 million contribution is projected to grow to more than $81 million.

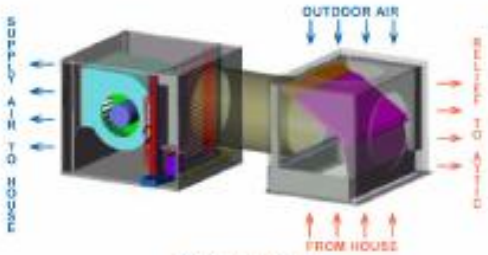
APPENDIX A

NIGHTBREEZE BROCHURE

NIGHT BREEZE™

For centuries people have cooled their homes by opening windows at night to let in the cool nighttime air, and closing them in the morning to trap the cool air inside. With today's lifestyles, opening and closing windows at the correct times may be difficult and can compromise home security. The NightBreeze system provides the same kind of ventilation automatically and securely. It also filters the outside air to create a healthier, more comfortable indoor environment.

Here's how it works: During the summer, if the house is warm and the outside temperature is cool, the NightBreeze system automatically brings outside air into the house through a special damper and ventilation duct. The thermostat has two settings, a low setting tells the system to stop ventilating if the house gets too cool. A high setting tells the system to turn



NightBreeze Unit

on the air conditioner if the house gets too warm. If outdoor air is warmer than indoor the air, the air conditioner will cool and recirculate indoor air.

You simply use the thermostat to select your "comfort range," telling the system the coolest and warmest temperatures you want, and NightBreeze does the rest. NightBreeze provides more ventilation on hot days than cool days, automatically adjusting the amount of ventilation to keep the house comfortable and save energy.

NightBreeze Control

During the winter, NightBreeze heats your house using heat from your water heater. A variable airflow fan — driven by the most efficient motor in the industry — delivers heat quietly and with a minimum of drafts to maintain exactly the temperature that you set with the NightBreeze thermostat. It also provides just the right amount of filtered outside air to keep indoor air fresh.

NightBreeze is the answer to your comfort needs. For more information, contact your NightBreeze dealer.

DAVIS ENERGY GROUP

APPENDIX B

NIGHTBREEZE DESCRIPTION

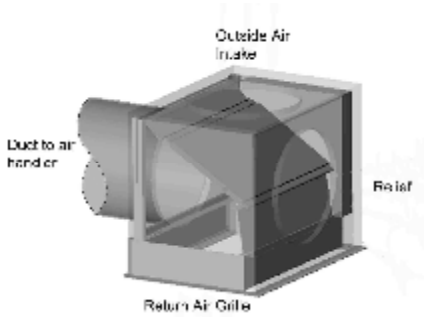
NIGHTBREEZE

NightBreeze is an integrated heating, ventilation cooling, air conditioning and fresh air ventilation system. DEG is completing development and demonstration of the NightBreeze residential cooling system for the California Energy Commission. Beutler Corporation of Sacramento is a subcontractor to DEG on the CEC contract, and Goodman Company of Houston, TX has agreed to work with DEG and Beutler to develop a version designed to work with a gas furnace.

Testing oF NightBreeze - Hydronic

Testing by Pacific Gas & Electric Co. verified air handler performance and found acceptable damper reliability and leakage rates. System features include:

1. A "user friendly" wall display unit (thermostat) that integrates control of heating, ventilation cooling, air conditioning, and fresh air ventilation and provides feedback on the consequences of user settings.
2. Control functions that predict future temperature conditions in order to provide information to the user about optimal comfort settings, to adjust ventilation cooling rates to minimize fan energy use and avoid overcooling, and to minimize air conditioner operation.
3. Quiet variable speed heating, and heating fan energy use that is less than half that of typical furnaces.
4. Winter fresh air ventilation that precisely meets ASHRAE Standard 62 air change requirements while using less fan energy than any other mechanical fresh air system available.
5. A limited quantity of NightBreeze systems being built for additional demonstrations and custom home projects. This technology is ready for full commercialization. A production readiness plan was completed.



NightBreeze Smart Vent Damper

Evaluation of Demand and Energy Savings

A calibrated DOE-2 model predicted an annual energy use that was within 5% of measured energy use for a demonstration house in Livermore. Findings from analysis of the 3080 ft² Livermore house design in all 16 California climate zones were as follows:

1. Non-diversified demand reduction averaged 4.0 kW across all climate zones (weighted by construction volume) and was as high as 5.4 kW.
2. Annual utility bill savings under time-of-use rates would exceed $400 in Climate Zones 8-15 and would exceed $700 in Climate Zone 13.
3. In a production scenario, energy savings will more than offset incremental mortgage costs in Climate Zones 2, 4, and 7-15 under time-of-use rates.
4. Analysis results suggest that green and efficient design strategies and ventilation cooling can eliminate the need for compressor air conditioning in Climate Zones 1, 3, 4, 5, and 6. Depending on homeowner comfort demands and specific house design and orientation, there is also a potential to eliminate air conditioning in zones 7 and 16.

NIGHTBREEZE – HUMID

Demand for improved indoor air quality and new ASHRAE residential ventilation standards will support the market for HVAC systems that integrate mechanical ventilation, and NightBreeze – Humid can accomplish this more cost-effectively than other alternative solutions. Time-of-use pricing or real time pricing would also greatly stimulate the market by making builders and buyers more aware of the importance of peak load reducing technologies.

Estimated Savings and Market Potential

To quantify the energy savings potential of the system, we estimated "typical" energy use for current central air conditioner energy use is based on EIA 1997 Residential Energy Consumption Survey data (EIA, 1997). Using the South region's average central air conditioner usage (2,899 kWh per year) as a proxy for representative usage, one can estimate the potential savings for the NightBreeze - Humid. In addition, we presume that a candidate house for a NightBreeze – Humid would also have a free-standing dehumidifier. Based on an average power of 700 Watts and 500 operating hours per summer, the dehumidifier would consume 350 kWh per year and reject approximately 1,200 kBtu of unwanted condenser heat to conditioned space. The combined energy use for the current "typical" air conditioner with dehumidifier is 3,250 kWh per year. Dehumidifier inefficiencies and added heat to conditioned space results in an estimated 26% degradation on overall cooling system efficiency. Phase I NightBreeze - Humid test results indicate that a significant fraction of the dehumidification can be performed solely by reducing evaporator airflow. Further dehumidification can be achieved by operating in subcooling mode, where overall system efficiency is reduced by 10-12%. Over the course of the summer we assume that the overall NightBreeze – Humid performance degradation is 5-6%, or 20% better than "typical" performance. The 20% savings translates to 650 kWh per year.

We estimate an annual market potential of 250,000 NightBreeze – Humid units, which would produce annual energy savings of 162.5 GWh worth over $13 million. The September 2003 issue of *Appliance Magazine* projected shipments of unitary HVAC equipment of 2.9 million for 2003 and 3.9 million for 2004. From Census Bureau data we concluded that about 75% of the U.S. population resides in climates where humidity is a concern. If 10% of the humid climate population is assumed to have a strong need for dehumidification, the annual potential NightBreeze – Humid market would be over 250,000 units per year.

APPENDIX C

NIGHTBREEZE – HUMID (I-HVCD) FACT SHEET

I-HVCD

Patent Pending

DAVIS ENERGY GROUP INCORPORATED

INTEGRATED HEATING, VENTILATION, COOLING & DEHUMIDIFICATION SYSTEM

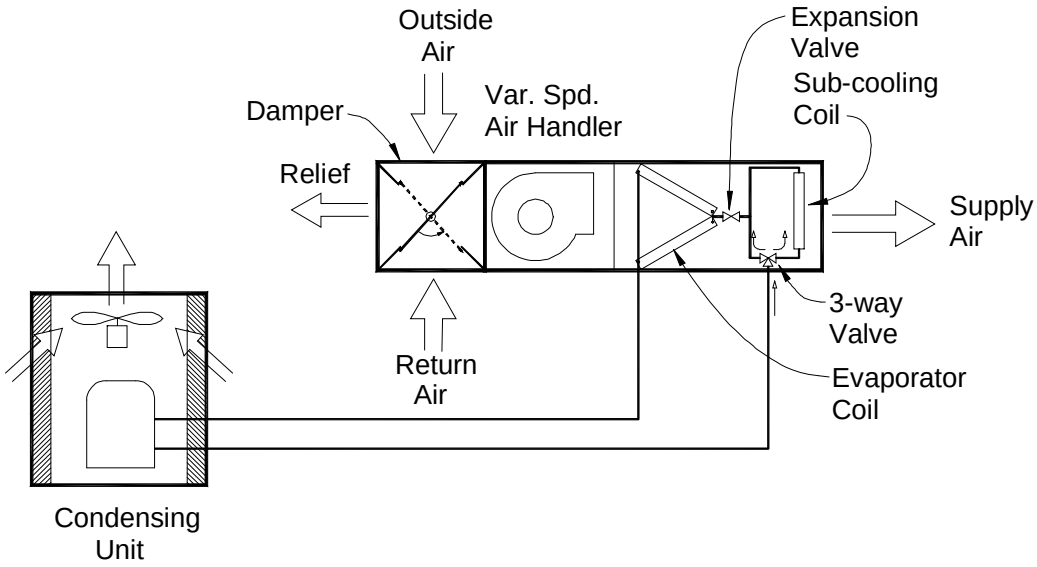
The Problem:

New homes in humid climates have lower sensible cooling loads due to their efficient envelope design and reduced leakage. They also have higher latent loads from fresh air ventilation. Conventional air conditioners cannot remove enough moisture to keep homes comfortable and eliminate the risk of mold growth. Dehumidifiers remove moisture, but add heat to indoor air, effectively reducing cooling efficiency by over 30%.

The Solution: Integrated Heating, Ventilation, Cooling and Dehumidification (I-HVCD)

A heating & air conditioning system that responds to indoor temperature, humidity, and homeowner comfort preferences and adjusts the ratio of sensible and latent cooling to control both indoor temperature and humidity, and that supplies dehumidified outside air to improve indoor air quality.

I-HVCD integrates refrigeration components with a variable speed air handler to provide responsive control of both indoor temperature and relative humidity, while using much less energy than an air conditioner and dehumidifier. Initially demonstrated under DOE SBIR Phase I funding, the project has recently been awarded Phase II funding to develop and test a near market-ready system.



APPENDIX D

OASYS FACT SHEET

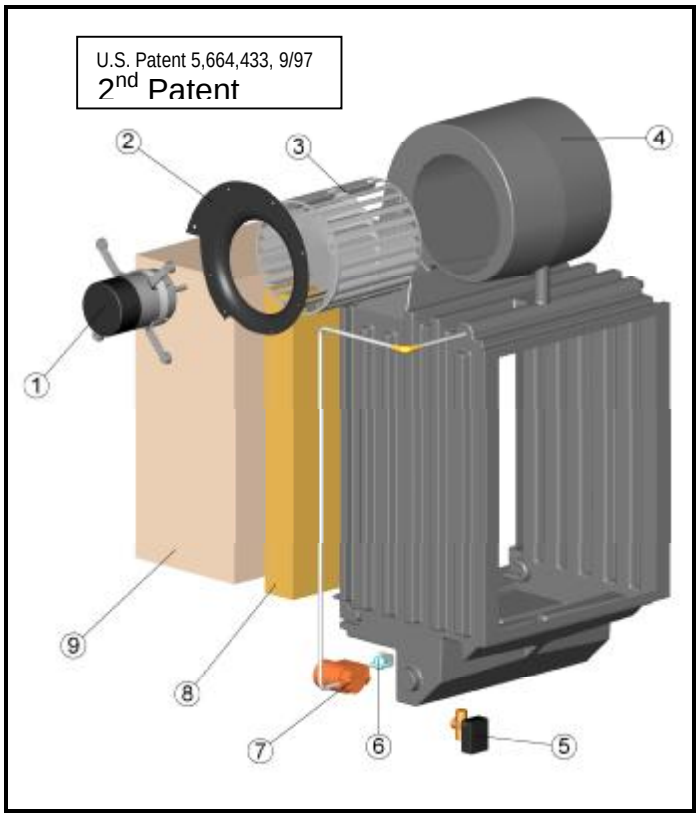
OASYS/IDEC

3rd Generation Indirect-Direct Evaporative Cooler

- **80-90% Cooling Energy & Demand Savings**
  - **Replaces 2-3 ton vapor compression system**
    - **0.5 kW Maximum Demand/Unit**
      - **100% Outdoor Air**

Manufactured by Speakman CRS

Developed by Davis Energy Group under cost-match research contracts with the California Energy Commission, Energy Technologies Advancement (ETAP) and Public Interest Energy Research (PIER) Programs, 1992–95, 1999-2003



1: ¾ hp GE ECM2.3 Electronically Commutated Motor **2**: Venturi mounting plate **3**: Morrison 11-11 squirrel cage blower wheel **4**: Polyethylene rotationally molded cabinet **5**: Drain valve **6**: Fill valve **7**: Taco 003 water circulator **8**: Munter's CELdek® 5090 direct cooling stage **9**: Speakman indirect cooling stage

- Indirect stage cools incoming fresh air without adding moisture, before it enters the direct cooling stage and indoors.
- Variable speed blower with smart controls optimizes energy savings. A steady state efficiency (EER) ranging between 40 and 135 (dependent on supply cfm) was measured in 2003 laboratory testing.
- Unique features to optimize energy performance and marketability include
  - Small footprint
  - Single variable speed blower
  - Proportional thermostat controls
  - Blower upstream from media
  - Single pump
  - Shared sloped sump
  - Programmed dryout cycles.

Performance and test data source: Davis Energy Group, Inc., Development of an Improved Two-Stage Evaporative Cooling System, Public Interest Energy Research Program, March 2004

SPEAKMAN CRS
Clean Renewable Sustainable

Speakman CRS
P.O. Box 191, Wilmington, DE 19899
Tel: 301.643.4115 / Fax: 302.765.0286
www.speakmancrs.com

DAVIS ENERGY GROUP
INCORPORATED

123 C Street, Davis, CA 95616
Tel 530-753-1100 / Fax 530-753-4125
www.davisenergy.com

APPENDIX E

HYPAK FACT SHEET

DAVIS ENERGY GROUP INCORPORATED

HyPak

- **High-efficiency hydronic rooftop packaged unit (RTU)** - **U.S. Patent Pending**

Features –

- **Evaporative condenser**
- **Indirect evaporative vent air pre-cooling**
- **Variable speed supply fan**
- **High efficiency heating with heat recovery**
- **Supply air isolated from moisture**
- **Accurate control of vent air rate**
- **High efficiency air filter**

Top photo – HyPak field test installation at McClellan Business Park

Performance -

- EER of 17 at Sacramento peak conditions measured in 2004 prototype tests by Des Champs Technologies.
- Cooling capacity and efficiency are unaffected by extreme (100°F+) weather conditions.
- Computer model projections for Climate Zone 12 (Sacramento):
  - 55% annual energy savings and 45% peak demand savings vs 10 EER.

Bottom photo – Prototype tests in progress at Des Champs Laboratories, 2004

HyPak development is co-funded by the US Department of Energy, National Energy Technology Laboratory, Davis Energy Group, and Des Champs Technologies

APPENDIX F

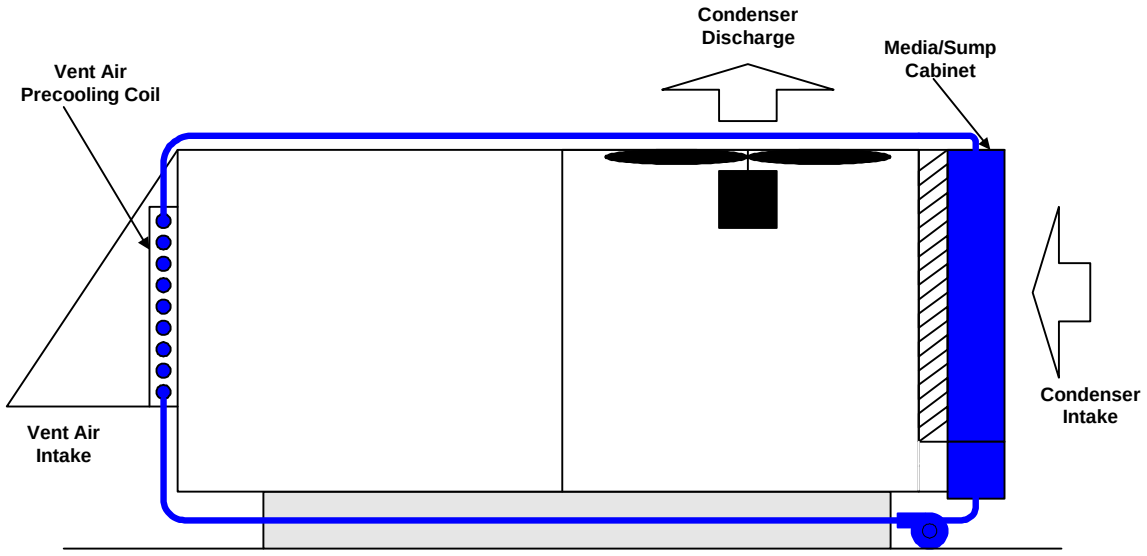
DUAL COOL DESCRIPTION

DUALCOOL

DualCool systems evaporatively pre-cool condenser and ventilation air for packaged rooftop cooling units. DualCool saves energy both by improving RTU performance and by reducing cooling loads. The systems improve compressor operating efficiency and increase capacity by reducing condensing temperatures. They reduce loads by indirectly pre-cooling ventilation air without adding moisture. In most cases, the higher capacity allows blower speed to be reduced, reducing blower motor energy consumption. Since blower heat is added to the supply air stream, reducing blower speed also reduces the cooling load and increases effective capacity.

The DualCool schematic (below) shows key system components, including evaporative media/cabinet, water sump, circulating pump, ventilation air coil, and piping. Condenser air is pre-cooled almost to the outdoor wet bulb temperature as it passes through the wetted evaporative media. Sump water collected at the base of the evaporative media is circulated through a cooling coil mounted at the ventilation air inlet, and then to the distribution header at the top of the evaporative media. DualCool is operated by a dedicated controller that initiates DualCool pump operation when outdoor temperature exceeds 70º F during compressor operation.

Figure 1: DualCool System Schematic



DualCool benefits include:

- Enhanced cooling capacity in hot conditions
- Lower compressor demand and improved efficiency relative to conventional RTU's
- Reduced supply blower power
- Elimination of second condenser fan in RTU's with two fans, due to cooler inlet air
- Reduced cooling load

APPENDIX G

DUAL COOL FACT SHEET

PEAK

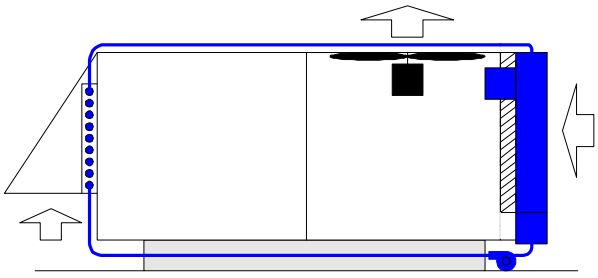
Cooling Energy & Demand

SAVING

DualCool

Limited Demonstration Offer

- ***Net installed cost less than $1,000/unit after utility incentive***
- ***One building, minimum 5 units***
- ***Limited to PG&E and SCE customers and available funds***



DualCool

- **Pre-cools condenser and ventilation intake air**
- **Reduces peak cooling loads and operating costs by 25% to 30%**
- **For commercial building rooftop cooling units (RTU's) 15-tons or larger**

DualCool Commercial
Cooling Load Reduction System

DualCool Engineering Impacts

PRE-COOLING PARAMETERS

	Condenser Media	Vent Coil
Typical maximum velocity (fpm)	**400**	**300**
Added pressure drop (1)	**0.17”**	**0.12”**
Effectiveness vs wet-bulb depression(1)	**80%**	**45%**
Leaving air temp(1)(2)	**76F**	**87F**

(1)-At specified maximum velocity; (2)-At 100F dry-bulb/70F wet-bulb

DualCool Economics

Excluding Demonstration Incentives

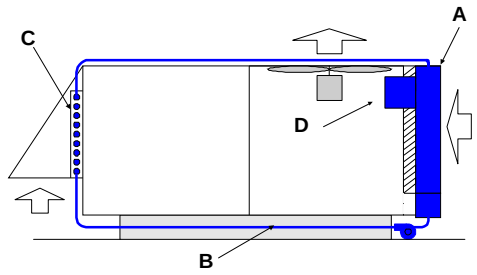
25-ton Unit Example -

- **Utility incentive** **$4,750**
- **Incremental cost** (1) **$3,250**
- **Estimated energy/demand savings per year** (2) **$1,950**

SIMPLE PAYBACK 1.7 YR

(1)-varies with size and location; (2)-@ $0.13/kWh

DualCool Schematic



DualCool quality guaranteed*

components added to a typical rooftop HVAC UNIT are highlighted (blue) above:

A. **Condenser air pre-cooler with integral sump**
B. **Copper supply/return piping and circulating pump**
C. **Ventilation air pre-cooling coil**
D. **Controls**

Performance & Specifications

(20/25 ton size range)

Evaporative Media

Rigid media manufactured from a high cellulose material with a unique cross-fluted design induces highly turbulent mixing of air and water for optimal heat and moisture transfer

Peak Demand Savings

Projected *DualCool* demand savings

Location	Design DB/WB	kW Savings* 20 ton	25 ton
Bakersfield, CA	104/70	**8.7**	**11.0**
Denver, CO	93/59	**7.4**	**9.4**
Escondido, CA	89/68	**5.1**	**6.4**
Medford, OR	98/68	**7.3**	**9.2**
Phoenix, AZ	109/71	**10.0**	**12.7**
Riverside, CA	100/68	**7.8**	**9.9**
Sacramento, CA	101/70	**7.8**	**9.9**
Salt Lake City, UT	97/62	**8.0**	**10.1**
Santa Rosa, CA	99/68	**7.5**	**9.5**

*at listed design conditions

ELECTRICAL COMPONENTS

Circ pump	8 gpm @ 115 volts, 1.3 amps, 60 Hz
Controls	24 volts. Programmable microprocessor with available real time data monitoring, diagnostics and communications capabilities
Cabinet	Grade 304 Stainless Steel construction with mounting flanges, removable access covers, media channels, 12 gal integral sump with fusion (TIG) welded joints
Piping	3/4” type M copper
Ventilation Air Coil	Minimum 7 ft^2 face area, double row, 8 gpm
Warrantv	*2 year limited warranty against manufacturing defects
Sales	

Integrated Comfort, Inc.

3811 Dividend Dr, Ste D
Shingle Springs, CA 95682
530-672-8402-Phone / 672-3518-Fax

APPENDIX H

AEP/DEG
INTELLECTUAL PROPERTY

AEP/DEG INTELLECTUAL PROPERTY

Patents

P1	Dual Cool	Patent No. 6,574,975B2	Issued 6/10/03
P2	IDEC-1	(Indirect-Direct Evaporative Cooler) Patent No. 5,664,433	Issued 9/9/97
P3	Night-Storage Underfloor Cooling	Patent No. 5,542,260	Issued 8/6/96

Provisional Patents

PP1	NightBreeze – Dehumidification		Filed 4/27/04
PP2	HyPak		Filed 9/12/03

Patent Applications

A1	CEWC	(Counterflow Evaporative Water Cooler aka VCEC) App. No. 10/624,633 Status: Filed, No action	7/23/04
A2	IDEC-2	(Indirect-Direct Evaporative Cooler) App. No. 10/737,823 Status: Filed, No action	12/18/03
A3	SunCache	App. No. 10/336,559 Status: Responded to office action of 4/21/04	
A4	NightBreeze	App. No. 09/802,883 Status: Responded to office action of 3/5/04	3/12/01

Trademarks

T1	NightBreeze	Granted	6/16/04
T2	grEEn	Application submitted	8/03/04

APPENDIX I

FINANCIAL PROJECTIONS

Advanced Energy Products
Consolidated P & L

PROJECTED INCOME STATEMENT-2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
REVENUE													
Residential													
ZTE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,850	$ 5,775	$ 7,700	$ 11,550	$ 15,400	$ 44,275
SmartVent	-	-	-	-	-	-	-	10,250	15,375	20,500	30,750	41,000	117,875
NBze-Hydronic	-	-	-	-	14,250	19,950	28,500	42,750	57,000	57,000	71,250	82,650	373,350
NBze-Gas	-	-	-	-	-	-	-	-	-	-	-	-	-
NBze-Humid	-	-	-	-	-	-	-	-	-	-	-	-	-
NBze-Hybrid	-	-	-	-	-	-	-	-	-	-	-	-	-
NBze-Retrofit	-	-	-	-	-	-	-	-	-	-	-	-	-
OASys	-	-	-	-	-	-	19,000	38,000	57,000	76,000	95,000	95,000	380,000
IDEC3	-	-	-	-	-	-	-	-	-	-	-	-	-
HyCool	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Residential	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Residential	0	0	0	0	$ 14,250	$ 19,950	$ 47,500	$ 94,850	$ 135,150	$ 161,200	$ 208,550	$ 234,050	$ 915,500
Commercial													
HyPak-OA	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ 50,000	$ 70,000	$ 70,000	$ 220,000
HyPak-MA	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Commercial	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Commercial	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000	$ 50,000	$ 70,000	$ 70,000	$ 220,000
Total Revenue	$ -	$ -	$ -	$ -	$ 14,250	$ 19,950	$ 47,500	$ 94,850	$ 165,150	$ 211,200	$ 278,550	$ 304,050	$ 1,135,500
COST OF GOODS SOLD													
Residential													
ZTE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,617	$ 2,426	$ 3,234	$ 4,851	$ 6,468	18,596
SmartVent	-	-	-	-	-	-	-	5,023	7,534	10,045	15,068	20,090	57,759
NBze-Hydronic	-	-	-	-	6,983	9,776	13,965	20,948	27,930	27,930	34,913	40,499	182,942
NBze-Gas	-	-	-	-	-	-	-	-	-	-	-	-	-
NBze-Humid	-	-	-	-	-	-	-	-	-	-	-	-	-
NBze-Hybrid	-	-	-	-	-	-	-	-	-	-	-	-	-
NBze-Retrofit	-	-	-	-	-	-	-	-	-	-	-	-	-
OASys	-	-	-	-	-	-	11,780	23,560	35,340	47,120	58,900	58,900	235,600
IDEC3	-	-	-	-	-	-	-	-	-	-	-	-	-
HyCool	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Residential	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Residential	$ -	$ -	$ -	$ -	$ 6,983	$ 9,776	$ 25,745	$ 51,147	$ 73,229	$ 88,329	$ 113,731	$ 125,957	$ 494,896
Commercial													
HyPak-OA	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 18,000	$ 30,000	$ 42,000	$ 42,000	$ 132,000
HyPak-MA	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Commercial	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Commercial	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 18,000	$ 30,000	$ 42,000	$ 42,000	$ 132,000
Total COGS	$ -	$ -	$ -	$ -	$ 6,983	$ 9,776	$ 25,745	$ 51,147	$ 91,229	$ 118,329	$ 155,731	$ 167,957	$ 626,896
GROSS MARGIN	$ -	$ -	$ -	$ -	$ 7,268	$ 10,175	$ 21,755	$ 43,703	$ 73,921	$ 92,871	$ 122,819	$ 136,094	$ 508,604
Gross Margin %	*n/a*	*n/a*	*n/a*	*n/a*	*51%*	*51%*	*46%*	*46%*	*45%*	*44%*	*44%*	*45%*	*45%*

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Advanced Energy Products
Consolidated P & L

PROJECTED INCOME STATEMENT-2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
GENERAL & ADMIN.													
Payroll (w/ben. & taxes)	$ 40,000	$ 45,000	$ 50,000	$ 60,000	$ 70,000	$ 75,000	$ 84,000	$ 86,000	$ 90,000	$ 95,000	$ 100,000	$ 105,000	$ 900,000
Non-Payroll													
Distribution Percentages								2%	2%	2%	3%	4%	
Distribution Costs	0	0	0	0	0	0	0	$ 1,897	$ 3,303	$ 4,224	$ 8,357	$ 12,162	$ 29,943
Product Development	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	6,250	75,000
Testing/Certification	-	-	-	-	2,000	2,500	3,000	3,000	3,500	3,500	3,500	4,000	25,000
Warranty	-	-	-	-	-	2,000	3,000	5,000	7,000	9,000	11,000	13,000	50,000
Professional Dev	417	417	417	417	417	417	417	417	417	417	417	417	5,000
Accounting	250	250	250	250	250	250	250	250	250	250	250	250	3,000
Legal	-	-	-	-	-	-	-	-	-	-	-	-	-
IP	583	583	583	583	583	583	583	583	583	583	583	583	7,000
Business	5,000	4,500	3,000	2,500	-	-	-	-	-	-	-	-	15,000
Org. Consultants	417	417	417	417	417	417	417	417	417	417	417	417	5,000
IT Consultants	417	417	417	417	417	417	417	417	417	417	417	417	5,000
Mkt/PR Consultants	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	1,667	20,000
Other Consultants	417	417	417	417	417	417	417	417	417	417	417	417	5,000
Marketing	-	-	2,000	2,000	4,000	6,000	6,000	4,000	4,000	4,000	4,000	4,000	40,000
Advertising	-	-	-	833	833	833	833	1,233	1,266	1,299	1,233	1,637	10,000
Auto	833	833	833	833	833	833	833	833	833	833	833	833	10,000
Computers	417	417	417	417	417	417	417	417	417	417	417	417	5,000
Computer Supplies	417	417	417	417	417	417	417	417	417	417	417	417	5,000
Insurance	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	30,000
Travel and Meals	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	25,000
Rent	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	4,167	50,000
Supplies	833	833	833	833	833	833	833	833	833	833	833	833	10,000
Telephone	417	417	417	417	417	417	417	417	417	417	417	417	5,000
Postage & Shipping	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	2,083	25,000
Utilities & Cleaning	500	500	500	500	500	500	500	500	500	500	500	500	6,000
Miscellaneous	3,667	3,667	3,667	3,667	3,667	3,667	3,667	3,667	3,667	3,667	3,667	3,667	44,000
Total - Non Payroll	$ 33,333	$ 32,833	$ 33,333	$ 33,666	$ 35,166	$ 39,666	$ 41,166	$ 43,463	$ 47,402	$ 50,356	$ 56,423	$ 63,132	$ 509,943
Total G&A	$ 73,333	$ 77,833	$ 83,333	$ 93,666	$ 105,166	$ 114,666	$ 125,166	$ 129,463	$ 137,402	$ 145,356	$ 156,423	$ 168,132	$ 1,409,943
EBITDA	$ (73,333)	$ (77,833)	$ (83,333)	$ (93,666)	$ (97,899)	$ (104,492)	$ (103,411)	$ (85,760)	$ (63,482)	$ (52,485)	$ (33,604)	$ (32,039)	$ (901,338)
CASH ADJUSTMENTS													
Capital Expenditures						$750,000							$750,000
Working Capital	500,000												500,000
Other	700,000	300,000	0	0	0	0	0	0	0	0	0	0	1,000,000
Total Adjustments	$1,200,000	$300,000	$0	$0	$0	$750,000	$0	$0	$0	$0	$0	$0	$2,250,000
EBITDA less ADJUSTMTS	$ (1,273,333)	$ (377,833)	$ (83,333)	$ (93,666)	$ (97,899)	$ (854,492)	$ (103,411)	$ (85,760)	$ (63,482)	$ (52,485)	$ (33,604)	$ (32,039)	$ (3,151,338)
CUMULATIVE POSITION	$ (1,273,333)	$ (1,651,167)	$ (1,734,500)	$ (1,828,166)	$ (1,926,065)	$ (2,780,557)	$ (2,883,968)	$ (2,969,729)	$ (3,033,210)	$ (3,085,696)	$ (3,119,299)	$ (3,151,338)	

Advanced Energy Products

Consolidated P & L

	PROJECTED INCOME STATEMENT-2006					PROJECTED INCOME STATEMENT-2007				
	Q1	**Q2**	**Q3**	**Q4**	**Total**	**Q1**	**Q2**	**Q3**	**Q4**	**Total**
REVENUE										
Residential										
ZTE	$ 46,200	$ 69,300	$ 92,400	$ 107,800	$ 315,700	$ 115,500	$ 130,900	$ 146,300	$ 161,700	$ 554,400
SmartVent	123,000	184,500	246,000	287,000	840,500	-	-	-	-	-
NBze-Hydronic	256,500	300,000	450,000	500,000	1,506,500	625,000	540,000	600,000	660,000	2,425,000
NBze-Gas	-	75,000	150,000	300,000	525,000	600,000	1,200,000	1,500,000	1,750,000	5,050,000
NBze-Humid	-	-	-	180,000	180,000	270,000	450,000	810,000	1,350,000	2,880,000
NBze-Hybrid	-	-	-	-	-	-	-	-	-	-
NBze-Retrofit	72,500	145,000	217,500	290,000	725,000	398,750	487,500	754,000	884,000	2,524,250
OASys	114,000	152,000	272,000	442,000	980,000	510,000	612,000	690,000	840,000	2,652,000
IDEC3	-	-	-	-	-	-	-	198,000	297,000	495,000
HyCool	-	-	-	-	-	-	-	-	-	-
Other Residential	-	-	-	-	-	-	-	20,000	40,000	60,000
Total Residential	612,200	925,800	1,427,900	2,106,800	5,072,700	2,519,250	3,420,400	4,718,300	5,982,700	16,640,650
Commercial										
HyPak-OA	$ 200,000	$ 200,000	$ 255,000	$ 340,000	$ 995,000	$ 425,000	$ 510,000	$ 490,000	$ 560,000	$ 1,985,000
HyPak-MA	-	-	-	-	-	-	-	520,000	780,000	1,300,000
Other Commercial	-	-	-	-	-	50,000	100,000	200,000	300,000	650,000
Total Commercial	$ 200,000	$ 200,000	$ 255,000	$ 340,000	$ 995,000	$ 475,000	$ 610,000	$ 1,210,000	$ 1,640,000	$ 3,935,000
Total Revenue	$ 812,200	$ 1,125,800	$ 1,682,900	$ 2,446,800	$ 6,067,700	$ 2,994,250	$ 4,030,400	$ 5,928,300	$ 7,622,700	$ 20,575,650
COST OF GOODS SOLD										
Residential										
ZTE	$ 19,404	$ 29,106	$ 38,808	$ 45,276	132,594	$ 48,510	$ 54,978	$ 61,446	$ 67,914	232,848
SmartVent	60,270	90,405	120,540	140,630	411,845	-	-	-	-	-
NBze-Hydronic	125,685	147,000	220,500	245,000	738,185	306,250	264,600	294,000	323,400	1,188,250
NBze-Gas	-	32,250	64,500	129,000	225,750	258,000	516,000	645,000	752,500	2,171,500
NBze-Humid	-	-	-	79,200	79,200	118,800	198,000	356,400	594,000	1,267,200
NBze-Hybrid	-	-	-	-	-	-	-	-	-	-
NBze-Retrofit	34,800	69,600	104,400	139,200	348,000	191,400	234,000	354,380	415,480	1,195,260
OASys	70,680	94,240	168,640	274,040	607,600	316,200	379,440	427,800	520,800	1,644,240
IDEC3	-	-	-	-	-	-	-	122,760	184,140	306,900
HyCool	-	-	-	-	-	-	-	-	-	-
Other Residential	-	-	-	-	-	-	-	8,400	16,800	25,200
Total Residential	$ 310,839	$ 462,601	$ 717,388	$ 1,052,346	$ 2,543,174	$ 1,239,160	$ 1,647,018	$ 2,270,186	$ 2,875,034	$ 8,031,398
Commercial										
HyPak-OA	$ 120,000	$ 120,000	$ 144,075	$ 192,100	$ 576,175	$ 240,125	$ 288,150	$ 259,700	$ 296,800	$ 1,084,775
HyPak-MA	-	-	-	-	-	-	-	322,400	483,600	806,000
Other Commercial	-	-	-	-	-	21,000	42,000	84,000	126,000	273,000
Total Commercial	$ 120,000	$ 120,000	$ 144,075	$ 192,100	$ 576,175	$ 261,125	$ 330,150	$ 666,100	$ 906,400	$ 2,163,775
Total COGS	$ 430,839	$ 582,601	$ 861,463	$ 1,244,446	$ 3,119,349	$ 1,500,285	$ 1,977,168	$ 2,936,286	$ 3,781,434	$ 10,195,173
GROSS MARGIN	$ 381,361	$ 543,199	$ 821,437	$ 1,202,354	$ 2,948,351	$ 1,493,965	$ 2,053,232	$ 2,992,014	$ 3,841,266	$ 10,380,477
Gross Margin %	*47%*	*48%*	*49%*	*49%*	*49%*	*50%*	*51%*	*50%*	*50%*	*50%*

Advanced Energy Products

Consolidated P & L	PROJECTED INCOME STATEMENT-2006					PROJECTED INCOME STATEMENT-2007				
	Q1	**Q2**	**Q3**	**Q4**	**Total**	**Q1**	**Q2**	**Q3**	**Q4**	**Total**
GENERAL & ADMIN.										
Payroll (w/ben. & taxes)	$ 327,130	$ 408,913	$ 516,522	$ 727,435	$ 1,980,000	$ 676,000	$ 720,000	$ 840,000	$ 964,000	$ 3,200,000
Non-Payroll										
Distribution Percentages	4%	5%	5%	6%		6%	7%	7%	8%	
Distribution Costs	$ 32,488	$ 56,290	$ 84,145	$ 146,808	$ 319,731	$ 179,655	$ 282,128	$ 414,981	$ 609,816	$ 1,486,580
Product Development	25,000	30,000	30,000	30,000	115,000	50,000	50,000	50,000	50,000	200,000
Testing/Certification	10,000	10,000	12,000	15,000	47,000	15,000	15,000	20,000	20,000	70,000
Warranty	15,393	21,337	31,896	46,374	115,000	43,657	58,765	86,437	111,142	300,000
Professional Dev	2,500	3,750	4,250	4,500	15,000	6,000	8,750	8,750	11,500	35,000
Accounting	1,250	1,250	1,250	1,250	5,000	5,000	5,000	5,000	5,000	20,000
Legal	-	-	-	-	-	-	-	-	-	-
IP	2,500	2,500	2,500	2,500	10,000	6,250	6,250	6,250	6,250	25,000
Business	3,750	3,750	3,750	3,750	15,000	13,750	13,750	13,750	13,750	55,000
Org. Consultants	3,750	3,750	3,750	3,750	15,000	11,250	11,250	11,250	11,250	45,000
IT Consultants	3,750	3,750	3,750	3,750	15,000	3,750	3,750	3,750	3,750	15,000
Mkt/PR Consultants	7,500	7,500	7,500	7,500	30,000	8,750	8,750	8,750	8,750	35,000
Other Consultants	5,000	5,000	5,000	5,000	20,000	7,500	7,500	7,500	7,500	30,000
Marketing	20,000	25,000	25,000	30,000	100,000	30,000	50,000	50,000	65,000	195,000
Advertising	6,250	6,250	6,250	6,250	25,000	25,000	25,000	25,000	25,000	100,000
Auto	5,000	5,000	5,000	5,000	20,000	10,000	10,000	10,000	10,000	40,000
Computers	12,500	12,500	12,500	12,500	50,000	22,500	22,500	22,500	22,500	90,000
Computer Supplies	5,000	5,000	5,000	5,000	20,000	10,000	10,000	10,000	10,000	40,000
Insurance	15,000	15,000	15,000	15,000	60,000	37,500	37,500	37,500	37,500	150,000
Travel and Meals	13,386	18,554	27,735	40,325	100,000	29,105	39,176	57,624	74,094	200,000
Rent	25,000	25,000	25,000	25,000	100,000	45,000	45,000	45,000	45,000	180,000
Supplies	3,000	5,000	6,000	6,000	20,000	4,000	6,000	6,000	9,000	25,000
Telephone	1,339	1,855	2,774	4,032	10,000	3,638	4,897	7,203	9,262	25,000
Postage & Shipping	7,362	10,205	15,254	22,179	55,000	14,552	19,588	28,812	37,047	100,000
Utilities & Cleaning	3,000	3,000	3,000	3,000	12,000	6,250	6,250	6,250	6,250	25,000
Miscellaneous	28,250	28,250	28,250	28,250	113,000	50,000	50,000	50,000	50,000	200,000
Total - Non Payroll	$ 257,968	$ 309,491	$ 366,554	$ 472,718	$ 1,406,731	$ 638,107	$ 796,804	$ 992,307	$ 1,259,361	$ 3,686,580
Total G&A	$ 585,098	$ 718,404	$ 883,076	$ 1,200,153	$ 3,386,731	$ 1,314,107	$ 1,516,804	$ 1,832,307	$ 2,223,361	$ 6,886,580
EBITDA	$ (203,737)	$ (175,205)	$ (61,639)	$ 2,201	$ (438,380)	$ 179,858	$ 536,428	$ 1,159,707	$ 1,617,905	$ 3,493,897
CASH ADJUSTMENTS										
Capital Expenditures			$750,000		$750,000		$1,750,000			$1,750,000
Working Capital					0					0
Other	200,000	0	0	0	200,000	200,000	0	0	0	200,000
Total Adjustments	$200,000	$0	$750,000	$0	$950,000	$200,000	$1,750,000	$0	$0	$1,950,000
EBITDA less ADJUSTMTS	$ (403,737)	$ (175,205)	$ (811,639)	$ 2,201	$ (1,388,380)	$ (20,142)	$ (1,213,572)	$ 1,159,707	$ 1,617,905	$ 1,543,897
CUMULATIVE POSITION	$ (3,555,075)	$ (3,730,281)	$ (4,541,919)	$ (4,539,718)		$ (4,559,861)	$ (5,773,433)	$ (4,613,726)	$ (2,995,821)	

Advanced Energy Products
Consolidated P & L

	PROJECTED INCOME STATEMENT-2008					PROJECTED INCOME STATEMENT-2009				
	Q1	**Q2**	**Q3**	**Q4**	**Total**	**Q1**	**Q2**	**Q3**	**Q4**	**Total**
REVENUE										
Residential										
ZTE	$ 169,400	$ 184,800	$ 200,200	$ 770,000		$ 223,300	$ 238,700	$ 246,400	$ 254,100	$ 962,500
SmartVent	-	-	-	-		-	-	-	-	-
NBze-Hydronic	800,000	960,000	1,040,000	3,920,000		1,200,000	1,500,000	1,700,000	2,000,000	6,400,000
NBze-Gas	2,000,000	2,250,000	2,200,000	9,050,000		3,000,000	3,200,000	3,400,000	3,600,000	13,200,000
NBze-Humid	1,800,000	2,000,000	2,800,000	9,800,000		4,000,000	4,800,000	4,550,000	4,900,000	18,250,000
NBze-Hybrid	-	-	-	-		244,800	367,200	489,600	530,400	1,632,000
NBze-Retrofit	1,040,000	1,170,000	1,320,000	5,210,000		1,920,000	2,040,000	2,160,000	2,400,000	8,520,000
OASys	1,050,000	1,440,000	1,560,000	5,730,000		1,450,000	1,550,000	1,600,000	1,650,000	6,250,000
IDEC3	495,000	940,500	1,176,000	3,913,500		2,436,000	2,604,000	2,112,000	2,178,000	9,330,000
HyCool	12,600	25,200	50,400	151,200		63,000	105,000	147,000	210,000	525,000
Other Residential	40,000	60,000	120,000	460,000		500,000	800,000	1,600,000	2,200,000	5,100,000
Total Residential	7,407,000	9,030,500	10,466,600	# 39,004,700		15,037,100	17,204,900	18,005,000	19,922,500	70,169,500
Commercial										
HyPak-OA	$ 700,000	$ 840,000	$ 910,000	$ 3,500,000		$ 1,190,000	$ 1,330,000	$ 1,470,000	$ 1,610,000	$ 5,600,000
HyPak-MA	1,040,000	1,950,000	3,450,000	13,340,000		8,050,000	10,350,000	11,000,000	13,000,000	42,400,000
Other Commercial	400,000	500,000	600,000	2,200,000		1,000,000	1,100,000	1,200,000	1,300,000	4,600,000
Total Commercial	$ 2,140,000	$ 3,290,000	$ 4,960,000	$ 19,040,000		$ 10,240,000	$ 12,780,000	$ 13,670,000	$ 15,910,000	$ 52,600,000
Total Revenue	$ 9,547,000	$ 12,320,500	$ 15,426,600	$ 58,044,700		$ 25,277,100	$ 29,984,900	$ 31,675,000	$ 35,832,500	$ 122,769,500
COST OF GOODS SOLD										
Residential										
ZTE	$ 70,470	$ 77,616	$ 84,084	322,722		$ 93,786	$ 100,254	$ 103,488	$ 106,722	404,250
SmartVent	-	-	-	-		-	-	-	-	-
NBze-Hydronic	392,000	470,400	509,600	1,920,800		588,000	735,000	833,000	980,000	3,136,000
NBze-Gas	860,000	967,500	946,000	3,891,500		1,290,000	1,376,000	1,462,000	1,548,000	5,676,000
NBze-Humid	792,000	880,000	1,232,000	4,312,000		1,760,000	2,112,000	2,002,000	2,156,000	8,030,000
NBze-Hybrid	-	-	-	-		102,816	154,224	205,632	222,768	685,440
NBze-Retrofit	488,800	549,900	607,200	2,418,700		883,200	938,400	993,600	1,104,000	3,919,200
OASys	651,000	892,800	967,200	3,552,600		899,000	961,000	992,000	1,023,000	3,875,000
IDEC3	306,900	583,110	729,120	2,426,370		1,510,320	1,614,480	1,309,440	1,350,360	5,784,600
HyCool	5,292	10,584	21,168	63,504		20,790	34,650	48,510	69,300	173,250
Other Residential	16,800	25,200	50,400	193,200	-	210,000	336,000	672,000	924,000	2,142,000
Total Residential	$ 3,583,262	$ 4,457,110	$ 5,146,772	$ 19,101,396		$ 7,357,912	$ 8,362,008	$ 8,621,670	$ 9,484,150	$ 33,825,740
Commercial										
HyPak-OA	$ 371,000	$ 445,200	$ 482,300	$ 1,855,000		$ 630,700	$ 704,900	$ 779,100	$ 853,300	$ 2,968,000
HyPak-MA	644,800	1,209,000	1,932,000	7,649,800		4,508,000	5,796,000	5,500,000	6,500,000	22,304,000
Other Commercial	168,000	210,000	252,000	924,000		420,000	462,000	504,000	546,000	1,932,000
Total Commercial	$ 1,183,800	$ 1,864,200	$ 2,666,300	$ 10,428,800		$ 5,558,700	$ 6,962,900	$ 6,783,100	$ 7,899,300	$ 27,204,000
Total COGS	$ 4,767,062	$ 6,321,310	$ 7,813,072	$ 29,530,196		$ 12,916,612	$ 15,324,908	$ 15,404,770	$ 17,383,450	$ 61,029,740
GROSS MARGIN	$ 4,779,938	$ 5,999,190	$ 7,613,528	$ 28,514,504		$ 12,360,488	$ 14,659,992	$ 16,270,230	$ 18,449,050	$ 61,739,760
Gross Margin %	*50%*	*49%*	*49%*	# *49%*		*49%*	*49%*	*51%*	*51%*	*50%*

Advanced Energy Products

Consolidated P & L

	PROJECTED INCOME STATEMENT-2008					PROJECTED INCOME STATEMENT-2009				
	Q1	**Q2**	**Q3**	**Q4**	**Total**	**Q1**	**Q2**	**Q3**	**Q4**	**Total**
GENERAL & ADMIN.										
Payroll (w/ben. & taxes)	$ 1,000,000	$ 1,400,000	$ 2,000,000		$ 7,000,000	$ 2,160,000	$ 2,352,000	$ 2,496,000	$ 2,592,000	$ 9,600,000
Non-Payroll										
Distribution Percentages	8%	9%	9%	#		10%	11%	11%	12%	
Distribution Costs	$ 763,760	$ 1,108,845	$ 1,388,394		$ 5,336,059	$ 2,527,710	$ 3,298,339	$ 3,484,250	$ 4,299,900	$ 13,610,199
Product Development	100,000	150,000	200,000	#	650,000	225,000	250,000	250,000	250,000	975,000
Testing/Certification	30,000	30,000	50,000		160,000	50,000	50,000	50,000	50,000	200,000
Warranty	164,641	212,471	266,037		1,001,000	617,672	732,712	774,011	875,604	3,000,000
Professional Dev	17,857	25,000	35,714		125,000	50,625	55,125	58,500	60,750	225,000
Accounting	10,000	10,000	10,000		40,000	18,750	18,750	18,750	18,750	75,000
Legal	-	-	-		-	-	-	-	-	-
IP	25,000	25,000	25,000		100,000	50,000	50,000	50,000	50,000	200,000
Business	56,250	56,250	56,250		225,000	100,000	100,000	100,000	100,000	400,000
Org. Consultants	25,000	25,000	25,000		100,000	18,750	18,750	18,750	18,750	75,000
IT Consultants	10,000	10,000	10,000		40,000	12,500	12,500	12,500	12,500	50,000
Mkt/PR Consultants	18,750	18,750	18,750		75,000	18,750	18,750	18,750	18,750	75,000
Other Consultants	6,250	6,250	6,250		25,000	12,500	12,500	12,500	12,500	50,000
Marketing	75,000	175,000	175,000		700,000	312,500	312,500	312,500	312,500	1,250,000
Advertising	87,500	87,500	87,500		350,000	175,000	175,000	175,000	175,000	700,000
Auto	31,250	31,250	31,250		125,000	56,250	56,250	56,250	56,250	225,000
Computers	50,000	50,000	50,000		200,000	100,000	100,000	100,000	100,000	400,000
Computer Supplies	31,250	31,250	31,250		125,000	56,250	56,250	56,250	56,250	225,000
Insurance	50,000	125,000	125,000		500,000	250,000	250,000	250,000	250,000	1,000,000
Travel and Meals	98,686	127,355	159,463		600,000	205,891	244,237	258,004	291,868	1,000,000
Rent	125,000	125,000	125,000		500,000	225,000	225,000	225,000	225,000	900,000
Supplies	15,000	25,000	30,000		120,000	56,250	56,250	56,250	56,250	225,000
Telephone	12,336	15,919	19,933		75,000	26,766	31,751	33,540	37,943	130,000
Postage & Shipping	24,672	31,839	39,866		150,000	41,178	48,847	51,601	58,374	200,000
Utilities & Cleaning	9,000	18,750	22,000		75,000	32,500	32,500	32,500	32,500	130,000
Miscellaneous	87,500	187,500	187,500		750,000	350,000	350,000	350,000	350,000	1,400,000
Total - Non Payroll	$ 1,924,702	$ 2,708,930	$ 3,175,156		$ 12,147,059	$ 5,589,842	$ 6,556,012	$ 6,804,907	$ 7,769,439	$ 26,720,199
Total G&A	$ 2,924,702	$ 4,108,930	$ 5,175,156		$ 19,147,059	$ 7,749,842	$ 8,908,012	$ 9,300,907	$ 10,361,439	$ 36,320,199
EBITDA	$ 1,855,236	$ 1,890,260	$ 2,438,372		$ 9,367,445	$ 4,610,646	$ 5,751,980	$ 6,969,323	$ 8,087,611	$ 25,419,561
CASH ADJUSTMENTS										
Capital Expenditures					$0					$0
Working Capital					0					0
Other	0	0	0	0	0	0	0	0	0	0
Total Adjustments	$0	$0	$0	#	$0	$0	$0	$0	$0	$0
EBITDA less ADJUSTMTS	$ 1,855,236	$ 1,890,260	$ 2,438,372		$ 9,367,445	$ 4,610,646	$ 5,751,980	$ 6,969,323	$ 8,087,611	$ 25,419,561
CUMULATIVE POSITION	$ (1,140,585)	$ 749,675	$ 3,188,047			$ 10,982,270	$ 16,734,250	$ 23,703,573	$ 31,791,184	

APPENDIX J

FINANCIAL PROJECTIONS
- ASSUMPTIONS

AEP Financial Projections – Assumptions

UNIT SALES

ZTE & Smart Vent

- Existing products
- Manufacturing by RCS/ZTECH
- Offered, but not 'sold' in southern California by distributors
- Sold in northern California exclusively by Beutler
- Hire southern California Sales Rep after startup
- Start selling in southern California to residential builders & their HVAC contractors '05
    - Start Reno at same time
- Expand to northern and southern Rockies '06

NightBreeze – Hydronic

- Start northern and southern California immediately upon start-up
- Northern Nevada '07
- Rockies '08

NightBreeze – Gas

- Finish development 2Q'05
- Put private label manufacturing contract in place by '06
- Beta test sales northern California '06
- Expand to southern California, northern Nevada, Rockies late '06 &'07

NightBreeze – Humid

- Develop '05 – '06
- Private label manufacturing contract end of '06
- Beta test sales Texas/Arkansas/Oklahoma area 4Q06
- Add Midwest '07
- Add Southeast '08

NightBreeze – Hybrid

- Propose and win R&D $> IDEC & NightBreeze on market ~ 1 year ('06)
- Develop '07-'08, put private label manufacturing contract in place and beta test – 1Q'09
- Start selling northern California '09
- Then expand to northern Nevada, southern California & Rockies

NightBreeze – Retrofit

- Develop ’05
- Beta test first half ‘06
- Start selling northern & southern California 2Q’06
- Add northern Nevada ’06, Rockies ‘07

IDEC

- Sign licensing contract ‘04
- Beta test northern California ‘05
- Add southern California 3Q05, northern Nevada & Rockies ‘07

IDEC^3

- Gain R&D funding ‘05
- Develop ‘06
- Beta test northern California ‘07
- Sell northern and southern California, northern Nevada & Rockies ‘08

HyCool

- Develop ’05 – ‘06
- Private label contract & beta test early ‘08
- Sell California and northern Nevada ‘08
- Add Rockies, southern Rockies & Southwest ‘09
- *Potential to start sales $\leq$ 1 year earlier held in reserve

HyPak – OA

- Private label contract & beta test northern California ‘05
- Sell northern & southern California ‘06
- Add northern Nevada ’07, Rockies & Southern Rockies ‘08
    - Some in Southwest also to complement HyPak – MA sales

HyPak – MA

- Develop ’05 – ‘06
- Beta test northern California ’07, start selling northern California
- Add southern California 1Q’08, northern Nevada & Rockies 3Q’08
- Add southern Rockies & other Southwest ‘09

PERSONNEL

'05

- 0-9 people

- Marketing – 1 Sales Rep – northern California, 1 Sales Rep. southern California, 1 Sales Assistant & 1 Marketing & Sales Director upon startup
- Admin – Manager & Assistant
  - Use contractors for computers
- Manufacturing – 1 Director
- Accounting – 1 bookkeeper

'06

- 22 people
  - Sales gaining traction
  - Business development paying off
  - Productivity increasing
- Revenue ~ $275k/person
- Add 2 Sales Reps, 1 Account Manager, 1 Sales Assistant, plus Admin and Accounting personnel in proportion
- Add liaison with Sustainable Community & Government/Utilities
- Add 2 Trainers and 1 Technician to teach installers and handle warranty work
- Add full-time in-house computer professional
- Grow distributor network

'07

- 40 people
  - Sales up 240%
  - Personnel up 80%
  - Productivity continues to increase
  - Use of distributors increases
- Revenue ~ $515k/person
- Add 2 Sales Reps & 2 Sales Assistants (~ double), add Manufacturing Engineer
- Start growing Training and Tech capability to prevent poor installs & handle warranty work
- Hire HR professional
- Grow Admin & Accounting proportionately

'08

- 100 people
  - Sales up 180%
  - Personnel up 150%

- Revenue ~ $580k/person
- Productivity growth slows as transition to high volume
- Build sales force, add 11 Sales Reps & 2 Account Managers (national accounts) & 7 Sales Assistants
- Bring PR in-house
- Build Trainer and Tech force
- Start some assembly work in-house or enhance QC staff as appropriate
- Add Admin & Accounting proportionately

'09

- 160 people
  - Sales up 111%
  - Personnel up 60%
  - Break-through productivity
- Add personnel proportionately across the board

PAYROLL

- Average $/person includes all taxes & benefits
- Starts high as management put in place
- Average decreases as reorganize (continually) for increasing reliance on support personnel

			(000$)		
	'05	**'06**	**'07**	**'08**	**'09**
Average $/ Person/Yr.	$100	$90	$80	$70	$60
Head Count	9	22	40	100	160
Payroll	$900	$1,980	$3,200	$7,000	$9,600

CGS

- Manufacturing costs per projections by product
- Shipping & other costs bring GCS to total of about 50% of revenue
- Average margin 50%, average mark-up 100%

OVERHEAD

- Product Development
  - Grows as quickly as possible and levels in the $1 M range
  - DEG does the bulk of R&D
- Product Testing
  - Grow with sales volume, with a lag
  - To make products "bullet-proof"

- Warranty
  - Grow to 2-3% of sales as quickly as possible

- The following expense categories grow roughly with sales, less a decrement to reflect economies of scale & productivity growth.

  Accounting – Productivity ↑ with high volume
  Legal
  Marketing – Grows with sales in latter years – starts at 3.5% of sales, then levels at 1%. This is in addition to marketing staff. Still may be low.
  Insurance

- The following expense categories grow roughly with head count

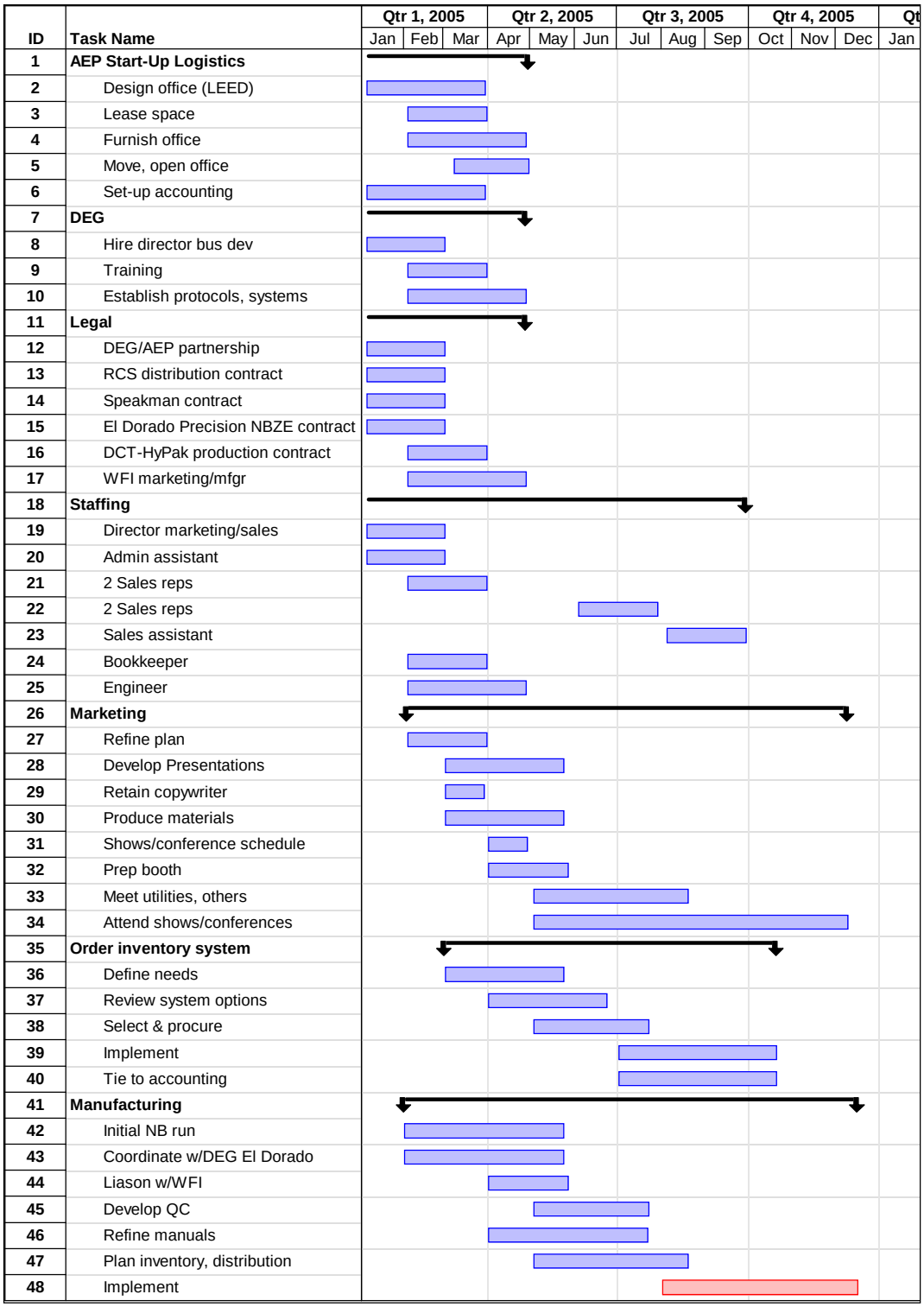
  Professional Development
  Auto
  Computer Supplies
  Supplies
  Telephone
  Office Utilities & Cleaning

- Consulting expense heavy in early years, fall as % of revenue as functions are brought in-house and as organization matures.
- Advertising – Reaches ~ .5% of sales in '07.
- Computers – Start-up, lull until head count grows ('06). Then grows with personnel growth and complexity of the business.
- Travel & Meals – Grows quickly as company expands beyond northern California ('06). Then tracks headcount
- Rent – Grows with office personnel – not as quickly for techs & field personnel.
- Postage & shipping – Growth slows with volume as products are more standard, the company's reputation grows and more shipping costs are shifted to customers.
- Misc. ~9% of Non-Payroll G&A rounded, '05 & '06, then drops toward 5%

APPENDIX K

AEP INITIAL TASKS

AEP Initial Tasks



ID	Task Name
1	**AEP Start-Up Logistics**
2	Design office (LEED)
3	Lease space
4	Furnish office
5	Move, open office
6	Set-up accounting
7	**DEG**
8	Hire director bus dev
9	Training
10	Establish protocols, systems
11	**Legal**
12	DEG/AEP partnership
13	RCS distribution contract
14	Speakman contract
15	El Dorado Precision NBZE contract
16	DCT-HyPak production contract
17	WFI marketing/mfgr
18	**Staffing**
19	Director marketing/sales
20	Admin assistant
21	2 Sales reps
22	2 Sales reps
23	Sales assistant
24	Bookkeeper
25	Engineer
26	**Marketing**
27	Refine plan
28	Develop Presentations
29	Retain copywriter
30	Produce materials
31	Shows/conference schedule
32	Prep booth
33	Meet utilities, others
34	Attend shows/conferences
35	**Order inventory system**
36	Define needs
37	Review system options
38	Select & procure
39	Implement
40	Tie to accounting
41	**Manufacturing**
42	Initial NB run
43	Coordinate w/DEG El Dorado
44	Liason w/WFI
45	Develop QC
46	Refine manuals
47	Plan inventory, distribution
48	Implement

APPENDIX L

DEG PRESS

DEG Press

1. *Integrated Comfort introduces 'NightSky system*, **The Air Conditioning, Heating, Refrigeration NEWS**, October, 1999.
2. Richard Bourne, *Night Moves*, **Architecture**, Davis Energy Group, Inc., November, 1999.
3. *Natural Cooling*, **Solar Today**, Davis Energy Group, Inc., April 2000
4. Peter O. Whiteley, *A laboratory for climate control*, **Sunset Magazine**, September, 2001.
5. Celia Lamb, *Davis firm refining plan for 'zero-energy' home*, **Sacramento Business Journal**, May, 2003.
6. Marc McArthy, *Homebuilder pushes envelope with energy-thrifty design*, **Sacramento Business Journal**, May, 2000.
7. William G. Phillips, *Evaporative Cooling Grows Up*, **Popular Science**, May, 1998.
8. Celia Lamb, *Business heats up for energy engineers*, **Sacramento Business Journal**, November, 2000.
9. *First Zero Energy Home Set for July Completion*, Million Solar Roofs, Press Release from **NREL**, 2003
10. *Alternatives to Compressor Cooling*, **California Energy Commission** PIER Buildings Program, Davis Energy Group, July 2004

APPENDIX M

DEG AWARDS

DEG Awards

1992 - Building Industry Association, **MAME Award,** Commendation for design, in the Energy and Water Efficiency Category. Co-sponsored by the California Energy Commission, California Landscape Contractors Assn., PG&E, SMUD, California Water Resources Board.

1995 – Association of Energy Engineers, Sierra-Sacramento Valley Chapter, **Energy Engineering Organization of the Year**.

1996 – City of Davis, California, **Environmental Recognition Award – Business Category**.

1999 – American Society of Heating, Refrigeration and Air Conditioning Engineers, **Technology Award - All Weather Manufacturing Office**, in the application of Heating, Refrigeration and Air Conditioning.

2000 – Habitat for Humanity, **Certificate of Appreciation**

2001 – International Ground Source Heat Pump Association, **Honorary Member in Good Standing**, Investment in the Geothermal Industry.

2002 – American Institute of Architects, **Award of Honor, Energy Efficiency Integration Awards, 2002 Savings by Design**,Co-sponsored by PG&E, SDGE, SCE, Sempra Energy – The Gas Company.

2003 – Radiant Panel Association, **2nd Place, Hydronic Commercial**, In recognition of outstanding achievement in the field of radiant panel heating and/or cooling.

2003 – American Institute of Architects San Francisco Design Awards, **Excellence & Green Design Award - Best of the Bay**. For the Camp Arroyo design.