



OUTLOOK



SUMMER 1980

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Outlook on Energy

by Michael Garland, D.G.S. Energy & Resources Manager

General Services, OAT and DWR are working extensively on the most significant energy program yet proposed for State facilities. At the request of the Governor, a plan is being prepared to develop, as soon as possible, 400 MW of cogeneration at State facilities. Cogeneration has become a priority because of the substantial energy-related, environmental and economic benefits it offers the State and the public. The Energy Assessment Group at General Services is heading this effort with OAT advising on technical and financial areas and DWR providing engineering support.

Recently, State facilities were evaluated by the Department of Water Resources to determine what potential existed in these facilities for the application of cogeneration technology.

An assessment report, prepared by a consulting engineering firm, covered 189 State-owned facilities. The report indicated that approximately 400 MW of the potential would be economically and technically feasible to develop.

Opportunities for cogeneration exist at State office buildings, universities and colleges, prisons, and hospitals. Cogeneration installations at such facilities would provide heat for space conditioning, water heating, or process heat as well as generate electrical energy.

What is Cogeneration?

Cogeneration is the production of electricity and useful thermal energy (heat). During the production of electricity, using conventional fuels such as natural gas, oil and coal, over two thirds of the energy in the fuel is converted to heat. Less than one third of the energy is converted to electricity. Little can be done to improve this conversion efficiency because of the natural laws of thermodynamics.

Today most power plants release the heat, or two-thirds of the fuel energy, into the atmosphere or into rivers. Cogeneration systems, on the other hand, are designed to recover this "waste" heat for useful work such as heating homes and smelting ores.

There are basically two types of cogeneration systems. They are

differentiated on the basis of whether electricity or thermal energy is produced first.

A *topping cycle* system refers to those that produce electricity first and capture thermal heat in the exhaust or waste streams of the equipment. The fuel is combusted in a boiler which drives a turbine, in a gas turbine, or in a diesel engine. The turbine or engine is coupled to a generator that produces electricity. The thermal energy is captured from the turbine or engine exhaust and from the engine jacket and oil cooling systems.

The second type of cogeneration is a *bottoming cycle* system. These use the thermal energy after it has been used in a process to produce power. For example, the exhaust heat from steel smelting, which requires temperatures greater than 2200°F, is hot enough to produce electricity directly. These systems usually use process steam to drive steam turbine-generator sets.

A major advantage of cogeneration is the economic benefit. Cogeneration systems range from \$600 to \$1,000 per kwh to design and construct and require about \$0.002 per kwh annual operating and maintenance costs. A 3 MW system would cost conservatively \$3 million to construct. A 3 MW cogeneration system, at a State hospital for example, could replace approximately 1.7 million therms of natural gas used for conditioning space and heating domestic hot water. At current natural gas prices (about \$.45 per therm) and average electrical rates (\$.05/kwh this system would save over \$200,000 annually in lower fuel bills and pay for itself in less than five years.

Under new State Public Utility Commission rules, utilities are required to buy electricity from cogenerators at the utility's "avoided" cost and sell power to the cogenerator at the utility's average cost. The avoided cost generally refers to costs the utility would have had to pay for new conventional power.

Because of these rates for buying and selling energy, the advantages for investing in cogeneration are significantly improved. For our 3 MW example of the annual savings of

SAFE TALKIN'

by Lynn Catania

As a General Services' employee, which of the following injuries are you most likely to incur while on the job?

1. Back Injuries
2. Knee Injuries.
3. Elbow, shoulder, ankle and wrist injuries.
4. All of the above.

If you answered "all of the above" you are correct. In the Department of General Services, the majority of injuries incurred on the job are back strains. Second are knee injuries with elbow, shoulder, ankle and wrist injuries being the third most common on-the-job injury.

The Department of General Services has an active safety program. Its goal is to reduce accidents. It is also striving to reduce the severity of accidents and days of lost work due to an injury on the job. This can only be accomplished with each and every employees' full and total commitment to safety.

There are many things that each employee can do to prevent accidents and injuries to themselves and fellow employees.

- Each employee should understand and comply with all safety rules
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\$200,000 using the new rates would increase to more than \$300,000 and have a payback of about three years.

The Department of General Services, the department of Water Resources, and the Office of Appropriate Technology will be working together and with other agencies of State government in the next few months to develop firm plans for incorporating cogeneration technology into the State's continuing effort to save energy.

For the 1980-81 Governor's Budget, General Services and OAT were successful in gaining Legislative approval of approximately \$6 million for cogeneration projects at Metropolitan, Napa and Atascadero State hospitals and Fairfield Animal Facility. These projects will save the State more than \$25 million through avoided fuel costs over the next twenty years.



1980 Sustained Superior Performance Awards



GARRY W. GRETER, Office Assistant II, State Architect — In addition to performing his normal duties, Mr. Greter has volunteered to learn the operation of a computer terminal, and he has exhibited such skill and knowledge, that he has freed engineers of the duty. He also completely reorganized the ordering and storage of supplies. He studied past orders to gain insight into the needs for supplies so that he can anticipate requirements. He is consistently speedy, accurate and thorough in the performance of his regular assignment. To improve his typing speed and skill, he worked diligently on his own time — breaks and lunch hours.



CONNIE M. EASTMAN-ORTEZ, Key Data Operator, Management Services — Ms. Ortez regularly exceeds the production standards of the Data Entry Group. She willingly serves in a lead capacity, and has helped train others in the unique requirements of her unit. She voluntarily served as a formatter and procedure writer, and maintained excellent relations with users of this service. She eagerly works whatever amount of overtime is needed to help her unit meet excess workload requirements.



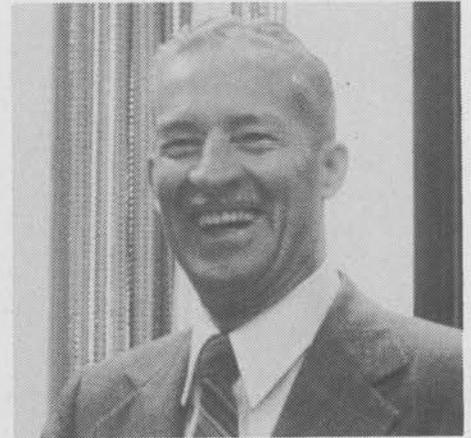
CURTIS L. GUINN, Janitor Supervisor II, Buildings and Grounds — Mr. Guinn supervises the janitorial crew at the Trans-Bay Terminal in San Francisco. The Terminal services approximately 45,000 people a day. It is a 24-hour operation, and contains restaurants, news stands, bus counters, a cocktail lounge, shoe shine parlors, and a gift shop. Mr. Guinn utilizes his staff in a very effective manner, and thus is able to maintain the terminal in acceptable condition. His skills and abilities as a supervisor have been demonstrated often, and his performance during the BART strike, when passenger traffic at the Terminal reached 70,000 people per day, was exemplary.



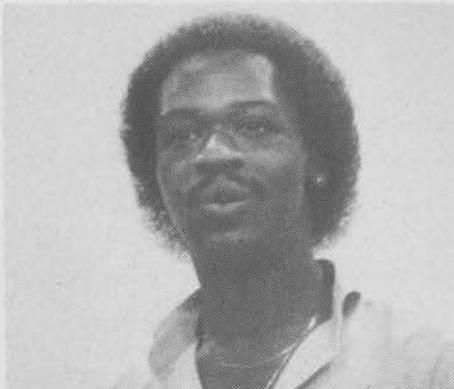
WILLIAM M. WILSON, Police Officer, State Police — Officer Wilson is a member of the two-person Explosive Ordinance Demolition Team. He has travelled throughout the State in response to emergency calls, and has disarmed explosive devices of life threatening potential. He was instrumental in establishing and sustaining the Metropolitan Explosive Ordinance Disposal Team, comprised of Federal, State, County, and Municipal law enforcement members. He has taught several hundred peace officers in the art of detection and safe disposal of explosive ordinance. His devotion to safeguarding the lives of public officials and State employees is unsurpassed.



JOAN CHRISTENSON, Police Officer, State Police — Officer Christenson has performed her duties in such a manner as to reflect the highest esteem of not only the State Police, but more importantly, the entire State service. She has proven time and again her capabilities, dedication, and devotion to her work. Every public contact she has made has resulted in an affirmative concept of an efficient and dedicated State employee. As an investigator she has been instrumental in the reorganization and development of more efficient methods to increase the programs efficiency and productivity.



HOWARD D. McVAY, Staff Leasing Officer, Space Management — As a Staff Leasing Officer in charge of Orange and Southern Los Angeles Counties, Mr. McVay has one of the fastest growing areas of assignment. He is frequently assigned the more complex and politically sensitive projects. His work is always of the highest quality. He is able to run his area with minimum supervision and maximum autonomy. He commonly works beyond the normal office working hours to assure that his work is completed. He is considered by his peers as one of the real "Top Pros".



ELZY R. BERRY, Janitor, Buildings and Grounds — Mr. Berry has displayed a willingness to accept added responsibilities, while maintaining his own work assignment in exceptional condition. He has been called upon to act in a lead capacity from time-to-time, and has shown an ability to effectively organize janitorial crews, and maintain reasonable janitorial service. He has been given many difficult assignments, and handled all of them well.



BILLY J. MINATRE, Groundskeeper, Buildings and Grounds — His supervisor notes that Mr. Minatre is always conscientious, and constantly strives to improve his gardening methods. He has received an Associate in Arts Degree in Ornamental Horticulture, and he is also willing to share his knowledge with fellow employees. During drought years, he voluntarily came to work early to water his area in the morning hours to conserve water. He has exhibited outstanding dedication to his duties and a sincere personal interest in maintaining his area at the highest possible level.



PAT LINCH, Office Technician, Communications — Ms. Linch performs all the divisional level personnel functions for her division. Her work brings her in close contact with the divisions 290 employees. These employees are at various locations throughout the State. Ms. Linch will forego breaks and work during lunches to get her work done on a timely basis. She will voluntarily take work home to meet a required deadline. She is extremely conscientious about her work, and has received frequent praise from other employees. Her work is always thorough and accurate, and she requires very little direction.



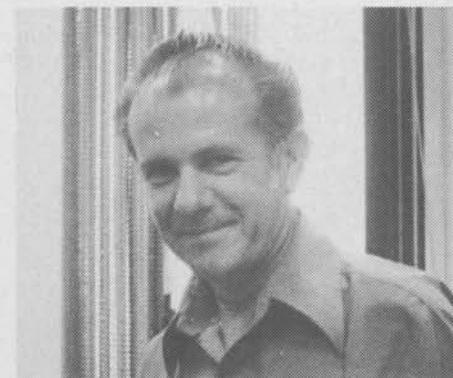
JOHN PUISHA, Supervising Architect, State Architect's Office — Throughout his more than 30-year career with the State, Mr. Puisha has, by a great margin, gone beyond the normal requirements of his positions as project architect and supervisor of the architectural design section. He has consistently spent many of his own hours in the evenings and on weekends to meet deadlines and accomplish design excellency. His quality of work has been demonstrated time-and-time again. Among the more notable projects in which he has had involvement, are the Del Mar Race Track and the California Maritime Academy.



ROBERT D. DUVALL, Property Inspector, Management Services — As Property Inspector for the Department, Mr. Duvall is responsible for accounting for over 70,000 pieces of equipment owned by either the Department or by contracted fiscal services' agencies. The importance of his duties cannot be overemphasized. Mr. Duvall takes obvious pride in his work, and is enthusiastic about helping others. Aside from his normal duties, he has been performing petty cash audits in conjunction with his equipment inventories, and assisting the State Bicycle Program. He has received many letters of commendation and appreciation, and is well respected by all his coworkers.



MAY LEE, Fiscal Quality Control Manager, Administrative Services — Ms. Lee's skills and character enable her to perform the duties of Fiscal Officer for the Agency Secretary's Office with efficiency and confidentiality. Her efforts ensure the accurate year-end closing of the accounting books for the department. Her expertise is recognized by others around the State. The Department of Finance requested her assistance in updating the Accounting Section of the State Administrative Manual, and in participating in a task force that produced a training course on the State Accounting System. The training course has benefited departments statewide through improved accounting skills. Other departments requesting and receiving the benefit of Ms. Lee's expertise in just the past two years are the State Personnel Board, California Conservation Corps and the Department of Conservation.



DONALD R. CUTTING, Heavy Duty Truck Driver, State Printing — Mr. Cutting consistently accounts for handling a million pounds of freight each month. This is far above the expected norm. In addition to hauling freight for the State Printing Plant, he has on occasion provided freight services for other agencies. He volunteered and has maintained responsibility for warehouse operations in off-site warehouse space. He has helped plan and execute complex out-of-town hauls. His morale is so high that it gives a lift to his fellow workers. He is respected by coworkers and supervisors.



DONALD MEDLEY, Police Officer, State Police — Officer Medley has been described by those who work with him as a quiet but efficient officer who not only gets his job done, but in doing so makes it easier for others to perform their duties. He has accepted the responsibility for supply and equipment inventory and maintenance, vehicle maintenance, and is the armory officer in the Southern Region. Officer Medley is known as a dedicated, caring and loyal officer.

*State of California
State and Consumer Services Agency*

**DEPARTMENT OF
GENERAL SERVICES**

EDMUND G. BROWN JR.
Governor

DAVID E. JANSSEN
Director

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GENERAL SERVICES PEOPLE

Rosamond Bolden has been named Departmental Chairperson of this year's United Way drive. With Ms. Bolden in charge, this year's campaign could set a new record for employee participation; just ask any Buildings & Grounds' employee about her ability to get people moving.

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Speaking of getting people moving, **Dale Ross**, the State Bicycle Program Coordinator, earned the Department a certificate of appreciation from the American Lung Association. Dale represented the Department at a bicycle fun faire.

• • •

Hanging up his gloves, but not giving up the ring, is **Sgt. Bob Byrd** of the State Police. Sgt. Byrd won the Silver Medal in the Lt. Middleweight Division of this year's Police Olympics. After having won two Gold Medals in the past, Sgt. Byrd was the focus of competition. Though he came in second, his final fight produced a standing ovation from the crowd at ringside.

Though out of competition, Sgt. Byrd has been accepted by the State Athletic Commission to become a boxing referee.

• • •



Donald Jephcott has 25 years of State service, all with the architects office.

A man not likely to retire from competition very soon is **Bob Woodall**, Chief of Records Management Division. Mr. Woodall has recently captured two major chili making contests with a recipe he calls "Red Neck Chili."

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Pete Hoijer, Ed Meyer and Killion Davis of Communications Division were at East Side, a microwave site near the town of Chular in Monterey County, June 11 to replace a broken microwave antenna radome (weather cover). While starting to remove the radome, they spotted a nest of four baby owls with their mother in the bottom of the microwave dish. They considered moving the owls but decided it would be more harmful to move them than to let them stay in the microwave dish — radiation and all. (Also, a mother owl can get cranky when her chicks are bothered.) So being the kind, good folk all Communications Division employees are, they left the baby owls and their mother undisturbed. For all you animal lovers, you will be reassured to know that the owls were only exposed to 1/500th of the allowable federal margin for microwave radiation. For you communications users, note the broken radome will be replaced when the owls leave the nest. After all, first things first!



Lt. Robert Ries

The end of August marked the end of a long and dedicated career for **Lt. Robert Ries** of the California State Police. Lt. Ries first signed on with the C.S.P. on October 15, 1947. He spent his entire time of service in the Sacramento area.

Lt. Ries rates Governor Knight as his favorite Governor, and working Cal Expo as one of his most difficult assignments.

Lt. Ries is described by his last supervisor — Capt. Richards says of the retiring Lt., "... (Ries) has consistently used excellent judgement and common sense. His job called for a great deal of tolerance, and he had it. His awareness of past practice was invaluable, and he will be missed by all of us here at the Capitol."

Sexual Harassment

by Larry Myers

Sexual harassment is a serious and growing concern among managers, equal employment opportunity officers, women program coordinators and most of all women — the persons most affected. The problem of sexual harassment is not new. Today, serious attention is being focused in this area because people are speaking out and demanding a work environment free of sexual harassment.

Some facts regarding sexual harassment:

1. Working women suffer from sexual harassment regardless of

their appearance, age, race, marital status, occupation, or socioeconomic status.

2. Women who work in factories, at clerical jobs, and at professional jobs consistently report sexual harassment.

3. All types of men, in all occupations have been reported as harassers.

4. Sexual harassment is not limited to private enterprises. It occurs in

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Safe Talkin'... (Cont'd from page 2)

and regulations.

- Keeping physically fit and mentally alert will help reduce injuries.
- Watch for and recognize potential safety hazards and correct them if possible. Be sure to report all potential safety hazards to your supervisor.

We all must realize that safety is not a part-time job. Safety is an important part of each work day. Doing a job correctly means doing a job safely.

Accidents cost more than the medical and compensation payments involved. Accidents cause suffering for the families and friends of the employee. Accidents lower the morale of fellow employees. The Department is attempting to reduce on-the-job injuries for employees. Since back injuries are the #1 injury in the Department, we feel it is important for all employees to be familiar with steps that each of us may take to reduce our chances for falling victim to this painful and degenerative injury. Some of the things that you can do to prevent back injuries are:

1. When lifting, keep your back straight.
2. If your load is too heavy, lighten it or get some help before you lift.
3. Lift with your legs, not your back — squat and bend your knees and hold the object close to your body.
4. Keep your weight down and exercise regularly to build strong supporting muscles for your back.
5. Never bend over, turn, or twist to pick up something even if it is a light object.
6. Don't slouch or bend over when sitting or driving.

In 70% of all back injury cases, the overriding cause was natural degeneration aggravated by occupational stress or injury. Improper heavy lifting and prolonged sitting are causes for this condition. Fully 80% of all back pain causes are a result of underexercised and weak stomach muscles. A total of 95 out of 100 back cases do not involve discs.

By keeping safe lifting practices in mind, you can keep yourself from becoming another back injury statistic.

Sexual Harassment... (Continued from page 7)

nonprofit and government organizations as well.

5. Sexual harassment is not a sexually motivated act. It is an assertion of power expressed in a sexual manner.

Sexual harassment has been defined by the Federal Office of Personnel Management as "deliberate and repeated unsolicited verbal comments, gestures or physical contact of a sexual nature which are unwelcomed" and which interfere with work productivity or affect a person's job.

Three U.S. Courts of Appeals have determined that females have a cause of action under Title VII of the 1964

Civil Rights Act. Under this Act, no criminal penalties or fines can be brought against violators; however, the law does require offenders to pay compensation damages to those who have been victims of discrimination.

The Department of General Services will handle sexual harassment allegations in the same manner as other forms of prohibited discrimination. Appropriate punitive action will be taken against any person found to be guilty of sexual harassment.

Any person wishing further information may contact Larry Myers or Lynn Catania at 2-5990.

On the Cover

The State of California Capitol Restoration Project wants your old office furnishings.

Are you cleaning out your desk, or refurbishing your office? Do you need more space in your storage area? Some of that old "junk" you don't want anymore may include some of the very things we need for the house museum displays in the restored Capitol!

As part of the Capitol Restoration Project, the House Museum Group will be re-creating the executive offices of the Governor, the Secretary of State, the Treasurer, the Attorney General, the State Archives, and the State Library as they appeared between 1900 and 1910. More than 14,000 items must be found in order to complete the displays: office furniture, old maps of California, turn-of-the-century adding machines, portable electric fans — a little of everything!

A few original furnishings have found their way back to the Capitol, but it now appears that many items will have to be replaced with authentic antiques or reproductions. The House Museum Group is hoping that many appropriate items can be found in various state offices — perhaps taking up needed space or otherwise getting in the way of more

modern, up-to-date furniture and equipment. Do you have something that should go on display in the restored Capitol?

Donors of an artifact can look forward to several kinds of satisfaction. For one thing, you will see your artifact on exhibit. The source of an artifact becomes part of its history, and therefore part of the history of the Capitol once the object becomes part of the Capitol museum collection. It would be fitting for the furnishing of the State Capitol museum to include items from your state office. In some cases the Capitol Restoration Project will be able to replace an artifact with its modern equivalent.

The cover photo shows the Secretary of State's Office circa 1902. If any of the items in this office look familiar, you may have something for the State Capitol.

Let us know if you have something that you think we might be able to use in the museum.

Inquiries or leads should be directed to:

House Museum Group
State Capitol Restoration Project
1280 Terminal Street
West Sacramento, CA 95691
916/371-4004