

(FOTO)

Social Responsibility

Seminar of the electricity sector gathers projects from all over the Country. **Page 6**

(FOTO)

Generation

Cachoeirão receives a statement from Aneel. **Page 9**

(FOTO)

Efficiency

Stand of *Casa Cor* sets a good example of sustainability. **Pages 10 and 12**

The sun shines for everybody...

However, Cemig is the first concessionaire to master the solar energy technology.

COMPANY

Electricity bill can help to find missing people (Contas podem ajudar...)

Since July Cemig has joined the campaign of the State govern that locates missing people. In partnership with Minas Gerais Civil Police Finding Missing People Specialized Station, every month, two photos of missing people are shown on the electricity bill.

Aware of how far the Company can reach in the whole State, with more than six million customers, it considers that such action is in accordance with its Statement of Ethical Principles and the Professional Conduct Code. According to Principle 5th, it supports the responsible action regarding the improvement of the quality of life of the several publics that the Company has a relationship with.

The commercial agent Esther Blacher, of the Coordination of Relations with Customers and Marketing Management – CR/MR, believes that the initiative “will help lots of families that have no means of making a proper campaign about the disappearance of their beloved ones that are missing. The electricity bills will work as a very intense communication channel, as they will go straight to each consumer’s home”.

Campaign

Created in July 2006, the campaign *Volta* (Come back) is an initiative of govern of Minas Gerais State, carried out by Voluntary Social Work Service – SERVAS. Since the beginning of the campaign, according to the Civil Police Finding Missing People Specialized Station, more than two thousand of children, adults and elderly people have been found.

Aiming at accomplishing the campaign more efficiently, the Police Station went through a big restructure and nowadays it has, among others, a computerized register of missing people and a psychology nucleus, social work and shelter services.

The address of Civil Police Finding Missing People Specialized Station is: *Avenida Antônio Carlos, 901 – 2o. andar, Bairro São Cristóvão, Belo Horizonte*. To give information about missing people, the telephone is 0800 28 28 197. The call is free of charge and it can be done anonymously.

(IMAGEM de conta de luz no canto inferior esquerdo da página)

(FICHA TÉCNICA)

(LOGO CEMIG)

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Cemig’s Mission: To act on the energy’s sector with profitability, quality and social responsibility.

(FOTO no canto superior direito da página)

Marco Antonio: “The best is exactly what the customer needs.”

EMD’s research has a second edition (Pesquisa da DGE...)

In April and May 2008, it was held the second Research of Customers’ Satisfaction carried out by the Entrepreneurial Management Board of Directors – EMD. All superintendents and managers of the Company could put forward their observations regarding the quality and importance of the rendered services by the board. Each executive evaluated three of the Logistic and Infra-structure Superintendence – LI, of the Materials Supply and Services Superintendence – MS, of the Human Resources – HR and of the Information Technology – TI, producing 146 evaluations per superintendence.

According to director Marco Antonio Rodrigues da Cunha, “there is no point in trying to do our best if it is not what the customer needs; we have to implement the improvements that the customers wish.”

As the questionnaires were being answered, the information was automatically encoded and stored in an electronic data base, guaranteeing its secrecy and enabling a statistic analysis of the data.

This research was structured according the methodology called *Parasuraman*, worldwide known as one of the best practices of measurement of the customers’ satisfaction. It was divided into the following dimensions: *tangible aspects, focus on the customer, safety, trust and personalization*.

The methodology was implemented under the guidance of PricewaterhouseCoopers and was adapted, according to the participation of representatives of all EMD’s superintendence, to the specific needs of Cemig. The result was an original scoring system of the answers that was successfully applied on two editions of this research.

The same methodology and questionnaire of last year was used on this edition, aiming at a comparison of the results and an evaluation of the efficiency of the plans of actions carried out on the previous cycle. The only difference was the fact that the evaluator could add comments, criticisms and suggestions, allowing a qualitative evaluation of the performance and a better understanding of the specific causes of dissatisfaction, since the customer has a tendency to focus directly on these points of his/her comments.

The results of these researches have enabled the elaboration of a diagnosis focused on the customers’ perception regarding the quality and opportunities of the services and supplied subsidies to make decisions and develop plans of actions in order to eliminate the cause of the critical matters.

These critical matters are detected through a cross-tabulation of the items that received the smallest evaluation and, simultaneously, the greater importance. It shows the need of care of the plans of actions in order to improve or to correct the detected problems. Another important product supplied by the research is the data that allow the calculation of the Customer’s Satisfaction Index – ISC of the evaluated superintendence. It works then as a thermometer that measures the effectiveness of the rendered services by EMD according to the customer’s perception.

Consortium establishes office of projects in Baguari (Consórcio implanta...)

The Consortium of Baguari Power Station celebrated the end of set up of its Office of Projects with a meeting held in Belo Horizonte in August 6th. It had the presence of representatives of Cemig, Furnas and Neenergia.

The objective of the office is to supply adequate conditions to manage a project with agility and competence, at a world where the scenarios, obstacles and the opportunities are changing constantly.

As a result of it, the consortium and the stockholder companies can count on a functional structure capable of setting out policies, methodologies and samples.

The set up followed the group of advised practices by the Project Management Institute – PMI. According to Cemig’s superintendent of Societies’ Generation and Transmission Enterprises – SE, Flávio Dutra Doehler, the secret of a project is not just to make things happen, but to minimize the problems, as the chances of success are bigger if the thought is structured, organized, fitted and correct.

Baguari’s Office of Projects has Flávio Doehler and the president of the Consortium of Baguari, Luiz Carlos Amarilho, as its sponsors. The engineer Humberto Paganini of the New Installations of Generation and Transmission Integration Management – ES/IN and Ricardo Vargas, of Macrosolutions consultant, were chosen as the managers of the project.

MANAGEMENT

Set up of Management systems at MS (Implantação de sistemas...)

Aligned to the objectives of strategic planning, aiming at a continuous improvement of its rendering services and having as a reference the measurement system and the management of the performance supplied by *Balanced Scorecard*, the Materials Supply and Services Superintendence – MS established as a priority strategic initiative, the certification of the processes of its managements.

The launching of the Quality Police of the nucleus was held last July 25th and it had the presence of the superintendents of Entrepreneurial Communication – EC, Luiz Henrique Michalick, and of Entrepreneurial Sustainability – ES, Luiz Augusto Barcellos Almeida, besides of the superintend of MS, Wagner Delgado Costa Reis, managers and employees.

At this event, the team of the Contract of Services and Integrated Solutions Management – MS/CS took over the commitment with the Quality Police of the management. A banner with the signature of all collaborators and a symbolic piece with 12 principles considered important for the team - commitment, customer's satisfaction, planning, and efficient result - were put on a nest to be "hatched" with care and dedication.

Superintendent Wagner Delgado affirmed that "the certifications accomplished enabled an excellent opportunity of integration among the employees that showed great motivation through their engagement, willingness, dedication and, mainly, persistence towards the set up of the systems". He added that, "the achievements accomplished will result on an improvement of the quality of the products and rendered services that, in its turn, will contribute immensely towards the reduction of costs and the optimization of the use of the resources, making feasible the operational continuity and the new investments projects of the Company".

Goals (Metas)

For 2008, the goal is to certify MS/CS within the scope *Planning, implementation and follow-up of the contracting of assets and services for the companies of Cemig Group and of the consortiums that it takes part on.*

The superintendence had already acquired, in 2004, a certification shared among the Material Quality and Suppliers Management – MS/QL and of Material Logistics and Administration Management – LI/IA - former Logistics and Storage Management - in Environmental Management System – EMS Level 1.

In December 2005, they got the second certification through the Planning and Integrated Material and Services Contracting Management, in accordance with ISO 9001 norm. The Services Acquisition Management and the Material Planning and Acquisition Management got their certifications, in accordance with ISO 9001 norm, last year.

The Material Quality and Suppliers Management – MS/QL, under a daring decision, implemented for its processes and within nine months, its Integrated Management System – IMS, that consists of Quality Management System – QMS (ISO 9001), EMS Level 1 and of Environmental Management (re-certification) and of Health and Safety Management System, in accordance with OHSAS 18001 norm.

(FOTO no pé da página)

(FOTO topo esquerdo da página)

Tamborilata Group performed the National Anthem at the opening

Cemig carries out an Environment Seminar (Cemig realize Seminário...)

Cemig, in partnership with the Brazilian Committee of Electricity Production and Transmission, coordinated the 3rd Brazilian Environment and Social Responsibility of Electricity Sector Seminar held in August 3rd to 5th, in Belo Horizonte. According to the coordinator of the event, Andréa de Almeida, of the Environmental Generation and Transmission Management – ES/AM, the event gathered institutions of all around the Country that showed what is being done towards the environmental and social responsibility fields.

The opening that took place on August 3rd, had the presence of Cemig's directors Fernando Henrique Schuffner and José Carlos de Mattos. Mattos emphasized that the works selected to be presented at the seminar are a demonstration of the interest that the topic environment and social responsibility has aroused among the specialized sectors of the companies of electricity.

During the opening, *Tamborilata Group*, a group from *Morro das Pedras* community, in Belo Horizonte, performed the National Anthem using instruments of percussion. The group is formed by youngsters from 12 to 24 years-old that belong to *Fica Vivo Program* of Minas Gerais govern. The program aims at decreasing the criminality and homicide in the areas of social risk.

The seminar gathered companies of the electricity sector that discussed about issues such as energy demand and offer, difficulties on operations of energy generation and transmission and the need of companies to take social-environmental responsibilities. The new certification of quality in the field of Social Responsibility, through the newly-created ISO 26000, and the qualification, generation of income and quality of life of the re-settled people by companies of electricity were some of the themes approached by companies of distinction of the energetic sector.

(FOTO topo direito da página)

Bag made by *Meninas do Cafezal*, BH

26 briefings presented at the event (26 informes...)

One of Cemig's presentations was a research about the substance MXD-100 to control golden mussel *Limnoperna fortunei*, a plague that puts at risk the operation of the power stations of the Country. The project, developed in partnership with Technological Center of Minas Gerais – CETEC and the manufacturer, shows efficiency at the fight against the mussel, besides of having low indexes of toxins.

The Electricity Company of Bahia State – COELBA, presented the pilot-project of recovering of the mangrove together with the community. Altogether, 26 briefings, selected by the seminar's Technical Committee, were presented by concessionaires of the national electricity sector.

(FOTO topo da página)

Pioneer on solar energy in Brazil (Pioneirismo em energia solar...)

Cemig, in partnership with Technological Center Foundation of Minas Gerais – CETEC, is the first Brazilian company to master, in laboratorial scale, the phases of the chain of generation of thermoelectric and solar photovoltaic energy, including the technology of silicon purification from metallurgic degree to solar degree. Its industrial production is considered vital for the installation of power stations at large scale and it will bring more resources for the economy of Minas Gerais, the national leader of silicon extraction.

Since the first semester, the first solar thermoelectric power station of Brazil, built by Cemig, has been working on a trial basis at the campus of Technological Education Federal Center of Minas Gerais – CEFET-MG, in Belo Horizonte. The power station, capable of generating 10kW, “is the first step for the construction of a bigger unit and the project already aroused the interest of big companies of energy in Brazil”, affirms the engineer of technology and standardization Alexandre Henrique Lisboa, coordinator of the project of the solar thermoelectric power station.

At the Light on Education Program - in association with the State Secretariat of Education and the State Secretariat of Development of the North and of Vale do Jequitinhonha and Vale do Mucuri - Cemig installed solar energy for the energy supply of 179 rural schools, that did not have electricity, in the counties of East, North and Vale do Jequitinhonha and Vale do Mucuri. The students of these schools are now able to access educational resources such as TV and VCR.

Technological Independence (Independência tecnológica)

However, Brazil has still to reach a level of technological independence, before solar energy becomes economically feasible and its benefits reach big concentrations of Brazilian consumers, according to Antônia Sônia Cardoso Diniz, engineer of planning of the Distribution Assets Engineering Management – EG/AE and manager of the project of development of the silicon purification technology.

To get an idea about the importance of the purification technology, it is necessary 10 grams of purified silicon to generate 1 watt of power. Therefore, a house that uses solar energy needs 1.5 kilo of purified silicon to generate enough energy, while a

(FOTO lado esquerdo superior da página)

Experimental Thermolectric Power Station at CEFET campus (Usina Termoelétrica experimental...)

(continuação da página anterior, artigo sobre Independência Tecnológica)

solar energy power station, with 50 MW (enough to supply a city of the size of Uberlândia), would need 500 tons of this material.

According to Antônia Sônia, the world production of silicon is of 780 thousand tons per year, of which only 5% are purified to serve the market. Brazil answers for 14% of global production, about 110 thousand tons/year of the raw ore, and Minas Gerais is the Brazilian State that has the biggest participation of the extraction of this mineral.

However, it is not very significant for the economy of the State as the market value of the gross product (without beneficence) varies from US\$1 to US\$1.5 per kilo (between R\$1.60 and R\$2.50) while the price of high-purity silicon can reach up to US\$500 (about R\$800) per kilo at short-term trading. At the long-term contracts the prices are also high. Last year it reached up to US\$70 (R\$112) per kilo and produced a profit margin of 53% for the producers of high-purity silicon.

Thus, the mastering of the technology will bring more resources for the economy of the State, main Brazilian producer of silicon, as the industry of solar photovoltaic energy is one of the sectors of the productive chain of energy that is growing fast. Only last year, the volume of resources involved in the entire worldwide productive chain reached the amount of US\$30 billion, about R\$50 billion.

Pilot-Plant (Planta Piloto)

P&D program of development of the silicon purification technology has already mastered the laboratorial production and it is currently on the second phase, to implement at CETEC, a pilot-production line of solar purified silicon and a prototype of solar cell that will begin with the construction of a pilot-plant that will produce 500kg of solar silicon. Next step will be to find partners within the private enterprise, in order to apply this technology on a commercial basis.

According to Antônia Sônia, the basic knowledge has already been mastered by the team, thanks to the production of silicon and of solar cells at laboratorial scale. However, they lack the productive experience of the process of purification and of manufacture of solar cells of low cost.

At Cemig's P&D projects, carried out within the P&D Program of Brazilian Electricity Regulatory Agency – Aneel, the company has tried to consolidate itself as a pioneering and innovative company through the establishment of a net of solid partnerships with centers and companies of excellence and of a vast program aligned to the main future tendencies, with emphasis on the renewable energetic alternatives.

(FOTO lado direito superior da página)

Solar Energy supplies a business establishment in Grão Mongol (Energia Solar abastece...)

(FOTO lado direito inferior da página)

Solar Cell uses purified silicon on its manufacture (Célula Solar usa silício...)

(Foto canto superior esquerdo da página)

INFOVIAS COLUMN (Coluna Infovias)

Infovias expands its networks (Infovias amplia...)

Infovias concluded in August, the installation of its Optical Network of Access using SDH NGN (Synchronous Digital Hierarchy) technology in the neighborhood of Jardim Canadá, county of Nova Lima and Santa Luzia, both located in the Metropolitan Region of Belo Horizonte – MRBH.

The company's network - that already served the neighborhood of Vale do Serro, in Nova Lima, in the border of Belo Horizonte county – started then to serve two other important areas of MRBH that have several companies and commercial establishments. It will contribute for the expansion and/or the consolidation of the businesses of their clients: the telecommunications operators focusing on services of voice and data transmission to the corporative market.

In September, Infovias plans to activate the Optical Network of Access in Montes Claros, in the North of Minas Gerais, and, in October, in Varginha and Pouso Alegre, in the South of Minas Gerais.

According to the commercial manager of Infovias, Paulo Tozo, “these expansions aim at servicing the demands of our clients of more wide-ranging network coverage and at important markets of the State of which we did not have participation, besides of servicing Cemig itself”.

On the top of that, Infovias has also extended the coverage area of its Multi-services Network using HFC (hybrid optical fiber and coaxial cable) technology in Contagem, to serve the Pay TV Brasil Telecom company that explores in this city TV and broadband Internet services via cable.

Sectorial Meeting with corporative clients (Encontro setorial com...)

Cemig promoted last August 12th, in Contagem, the Sectorial Meeting of Corporative Clients of Cast-iron Sector. About a hundred representatives of the corporative clients took part on the event, that is to say, those of high and medium tension that have a contracted demand above 500KW.

The corporative clients of the cast-iron sector promoted the creation of forums to carry out debates, narrowing and increasing the commercial and technical relations, aiming at fortifying the partnership among Cemig and clients.

It was also promoted the exchange of experiences and knowledge of the optimized use of energy on the clients' productive processes and, thus, to contribute towards the growth of competitiveness of the several sector that are subject to the vulnerabilities of domestic and foreign market. The event, besides of promoting opportunity of new business for Cemig, meant also a possibility to deepen the understanding of the opportunities and risks of this market. Thus, the Company has more information that makes easier the creation of alternatives to serve better to the needs of its clients.

According to commercial director, Bernardo Afonso Salomão de Alvarenga (*photo*), “we are organizing again such events as we believe that the exchange of information among clients and Cemig is as important as the opportunity that they offer to the companies of the same industrial field to meet and exchange information among them”.

During the meeting, representatives of Cemig approached the themes *The Cast-Iron Sector at Cemig* and *Clients Relations*. Efficiencia presented the opportunities of energetic efficiency on cast-iron sector. The event offered also lectures given by the State Secretariat of Economical development, Silviculture Association of Minas Gerais and Iron Industry Syndicate of Minas Gerais State. On the top of that, clients of Pitangui Iron Metallurgy, Paulino Iron Metallurgy and Cisam Iron Metallurgy.

Superintendent is elected for Abraceel (Superintendente é eleito...)

(FOTO no meio do artigo)

The Brazilian Energy Traders Association – ABRACEEL, elected by acclamation the superintendent of Wholesale Purchase and Sales of Energy – PS, the engineer José Raimundo Dias Fonseca (*photo*), to take over the Supervisory Board. Fonseca is a professor at PUC Minas and has done a post-graduation course at Getúlio Vargas Foundation (FGV) and in Stockholm (Sweden).

For the fiscal council of the Electricity Chamber of Commerce – CCEE – body that centralizes the operations of purchase and sales of electricity in the Country – it has recently been chosen as a substitute, analyst Bráulio Machado Dolabella, of the Energy Operation Control and Settlement Management – CV/EO.

Cemig is a leader regarding the number of consumers as well as the volume of energy sold on this segment in the open market of energy of the Country. It is a sector that handles more than R\$10 billion per year. Cemig sells energy in Minas Gerais and to big clients of eight Brazilian States: Rio de Janeiro, Espírito Santo, São Paulo, Santa Catarina, Rio Grande do Sul, Mato Grosso do Sul, Goiás and Mato Grosso.

(FOTO canto superior esquerdo da página)

Hydroelectric is located in Vale do Rio Doce

PCH Cachoeirão receives a declaration of Aneel (PCH Cachoeirão recebe...)

The *Pequena Central Hidrelétrica – PCH Cachoeirão* (Small Central Hydroelectric Power Station) was favored with the Declaration of Public Interest of areas of the Pocrane and Alvarenga counties, in the East of Minas Gerais, approved last 12th during a public meeting of the board of Brazilian Electricity Regulatory Agency – ANEEL. The process of obtainment of the Operation License has already begun and once it is done, the reservoir of the power station, located in Manhuaçu River, will be filled up. The work estimated in R\$3 million, is being carried out by a Society of Specific Purpose – SSP, formed by Cemig (with 49% of participation) and *Santa Maria Energética*.

It is foreseen that the power station begins to work in October this year. Cachoeirão that will have 27MW of power, will be the first power station built by means of Minas Program PCH, of the state govern, that will be put into operation. Brazilian Electricity Regulatory Agency – ANEEL has approved other five projects sponsored by the program. The works of PCH Pipoca, one of these five projects, should start this semester.

The coordinator of the work and engineer of the Generation and Transmission Societies Management – ES/SC Marco Aurélio Dumont Porto, emphasis that in order to fit the power station with the concept of Small Central Hydroelectric Power Station (PCH), the reservoir has to have a flooded area lower than 3km². In Cachoeirão case, this area corresponds to 114 thousand square meters and, for that reason, there was no need to resettle the residents.

Even so, a Plan of Environmental Control was carried out. The Plan was formed of several environmental programs and social works, similar to the ones designed for big power stations, that benefited mainly the residents of Barra Mansa district (Alvarenga county) and Cachoeirão (Pocrane county).

Among the improvements performed by SSP in both districts, there are: donation of vehicles; construction of health center, footbridge and sport center; the refurbishment of the facilities of Military Police and Digital Inclusion Project at Barra Mansa and Cachoeirão schools – including the installation of computing laboratories and access to the Internet. Besides of that, they have built a sewage treatment plant in the district of Cachoeirão and septic tanks for the houses and school of Barra Mansa.

EFFICIENTIA BRIEFING

(FOTO no meio do artigo)

Energetic efficiency at ACS call center (Eficiência energética no...)

From the signature of a contract of performance with Algar Call Center Service – ACS company in Uberlândia, Minas Gerais Triangle, and the environmental acclimatization system of Efficientia became more energetically efficient from the interconnection of its two buildings located at a same piece of land.

The environmental acclimatization system of the first building, the oldest one, used to be supplied by a refrigeration system that was considered obsolete and inefficient. The second building used to have a group of refrigeration system of a more modern technology, with a thermo-accumulation system, that resulted on a much lower cost of acclimatization than of the another building and, therefore, more efficient.

The project aimed at using the idler capacity of the existing tanks of thermo-accumulation and chillers of the second building in order to serve the other one. To achieve that, it was necessary to elaborate operational projects of refrigeration, electricity and automation of the cold water central station of the first building; to change the distribution tree of the tanks' water by another of bigger discharge, to serve the demand of consumption of cold water of both buildings; interconnection of the hydraulic network of cold water of the tanks up to the central station of the first building; re-adaptation of the cold water central station of the first building, changing it into two circuits of cold water with a discharge control, so the water of the thermo-accumulation tanks can be used; the installation of the necessary automation of this cold water central station; the remodeling of pumps and electric panels according to the new cooler circuit.

Since then the demand of electricity at peak busy hour and regular hour of about 40kW and the annual consumption of electricity of about 30MWh have reduced. According to the coordinator of the project and engineer of energetic solutions at Efficientia, Ricardo Dimas, ACS belongs to Algar group that is a conglomerate with more than 53 years of experience at several sectors in the country.

(FOTO no canto superior direito da página)

Trial at aerial baskets (Ensaio em cestas aéreas)

Diversified Inspections American Company, in association with *Ritz do Brasil*, carried out in July and August, trials of acoustic transmission in 32 aerial baskets used by the teams of live line of Cemig. The trials were performed at *Quartirão 10* of Industrial City unit – Q10/CI. It was an initiative of the Distribution Assets Engineering Management – EG/AE, Field Service Engineering Coordination and Management – OM/FE and of Transports Coordination and Management – LI/TC.

According to Hélio Domingos Ribeiro de Carvalho, engineer of planning and operation of the EG/AE maintenance of the distribution, the machines used are the equipment that show longest time of use and that represent almost half of the entire fleet of aerial baskets for live line services.

In the USA the trial of acoustic transmission in aerial baskets has been done for over than ten years but it is still rare in Brazil and, for Cemig, it was its first experience. Two American technicians, that brought the needed equipment, came to Brazil to perform the trials.

The operational conditions of the bottom and top arms, joints and bucket that form the aerial baskets were analyzed. Ten sensors that evaluated the conditions of preservation and operation were applied on the aerial baskets during a load two times bigger than the work load, applied with a help of a hoist (*photo*).

Employees meet new technology (Empregados conhecem...)

Cemig is studying the technology of on-line measurement of partial discharges to elaborate diagnosis and evaluations of the real state of the underground distribution network installed in 1973 in the central area of Belo Horizonte, in order to subsidize studies about the need of replacement of network components that have operated for 35 years. From a precise diagnosis of the dielectric of the cables and accessories of medium and high tension in question, it will be possible to estimate the current state and useful life of the installation.

A presentation of the on-line measurement of discharges system was performed by engineers of *Techimp* and *Retech Brasil*, at University of São Paulo – USP, and it had the presence of engineers Renato Bernis, of the Distribution Assets Engineering Management – EG/AE, and Emerson de Sales Cruz, of the Construction Services and Central Distribution Maintenance Management – CD/CM and of other technicians.

The on-line measurement of partial discharges of the electric systems' assets is a technique of monitoring under tension, using tools and processing of statistic data of fuzzy logic, collected at just one equipment that allows the detection and forecast of a fault of an asset, of which dielectric had already begun a deterioration process that will put at risk the operation of the electric system, interrupting the energy flow.

GASMIG COLUMN

Gasmig enters into the residential segment (Gasmig entra no segmento...)

For the first time in the State, the natural gas can be used by residential consumers. The enterprise *Mirante do Sol* of Inpar building contractor, in *Lagoa dos Ingleses*, set the debut of the Gas Company of Minas Gerais – GASMIG in the segment. Currently, the fuel distributed by the company is used at industries, vehicles, in the sector of services and on the generation of energy by thermoelectric power stations.

The pioneer project, that has an investment of R\$420 thousand, will use Brumadinho-Nova Lima Trunk Line, one of the distribution networks of Gasmig that is close to the enterprise. The condominium will have 292 apartments supplied by the fuel that will replace partially the use of electricity, with the central water heating, and to spare the use of liquid petroleum gas – LPG, know as kitchen gas.

Other suggestions of use of the natural gas at houses are exhibited at a show of *Casa Cor 2008*. Gasmig installed a small supply system, so the visitors can see fireplaces, heated floors and garden heating at operation.

Mirante do Sol should be delivered in April 2010, but Gasmig is already studying to increase its participation in the residential segment, taking advantage of the moment of expansion that the company is going through and the expansion of the geographic coverage of its networks. In Belo Horizonte, the first neighborhood to receive the gas for residential use should be Cidade Nova.

(FOTO no canto superior direito da página)

New houses will be built for those who live bellow the lines in Mauricéia Village (Na vila Mauricéia, serão...)

Agreement in Montes Claros (Convênio em Montes Claros)

Cemig and the City Hall of Montes Claros signed last May an agreement to regulate the supply of electricity to Mauricéia Village, in the northwest region of the city, and to remove the families that live below the transmission lines of the Company. In the following years, some improvements on the urban and environmental area of the neighborhood will be performed. The objective is to discourage the construction of new buildings and the irregular use below of the lines and bands of domain and service. These measures will guarantee also better living conditions for the residents.

One of the foreseen measures is the construction of houses for 144 families that, at present, live below the transmission lines. There is also the possibility of including other families, totalizing the resettlement of 212 homes. The financial participation of Cemig is about R\$1 million. These resources will be used on the first phase of the project that has an estimated conclusion for December 2008. The time limit term of the agreement is 60 months.

Mauricéia Village is located close to Montes Claros Sub-station 1, in an area of 14.09 acres, and it is surrounded by neighborhoods of middle class and upper middle class. Since the 90's, when the irregular occupations increased, Cemig in partnership with Military Police has looked for a definite solution for the matter. On the last years, however, the urbanization of the surroundings of the neighborhood with the construction of medium and high standards and of the campus of a university began, opposing to the critical state of the Village's houses.

On one hand, this contrast shows advantages to the residents that have more opportunities of work and access to public equipments. On another hand, it jeopardizes the social organization of Mauricéia Village's residents. The most affected ones are mainly the youngsters that are associated with problems of violence and use and drug traffic, reinforcing prejudice and the discrimination of the residents and the regular visitors of the surroundings in relation to the neighborhood.

"To transform Mauricéia Village, recovering it on its urban aspects and promoting the valuation of its inhabitants, will certainly go through the redefinition of their inclusion and new articulation with the surroundings", explains Evandro Magalhães Dantas, manager of Commercial Relations and Services Management of Montes Claros – DO/MC. On Cemig's side, the follow-up of the works is done by a Group coordinated by commercial agent Conceição Dilene Batista Cavalcanti, of DO/MC.

According to Dilene, the agreement not only will reduce the risks due to the occupation below the transmission lines and towers, but it will improve the housing conditions, changing the tendency of growth of the occupation consolidation and the consequent growth of environmental degradation, regulate the legal situation of the resettlement and improve the socio-economic indicators of the population. It is also part of the project, the implementation of *Conviver Program*, developed by the Coordination of Income Protection and Use of Energy Management – RC/IR, in order to optimize the consumption of electricity, using efficient equipments, solar heating and changes in the residents' habits.

EA/DOC takes over partial operation of sub-stations in the East (COD/LE assume operação...)

Since July 10th, the East Distribution Operation Center – EA/DOC took over the telecontrol of the feeders of 13.8kV of Sub-Station – SS Governador Valadares 2 that was controlled by the East Transmission Management – AT/EA, under the coordination of COS. This was possible thanks to the integration of the supervisory systems used by EA/DOC (Xomni) and by COS (SSCD), implemented by the Generation and Transmission Operation Management – PO/GT and of Distribution Engineering Systems Management – EG/DS, together with East Operation and Maintenance Management – DL/ML. Besides of that, this solution will allow EA/DOC to control remotely the other feeders of 13.8kV of the SSs Itabira 2 and Ipatinga 1, foreseen to happen soon.

EA/DOC's coordinator, Paulo César Soares, explains that the change will result on a faster re-establishment of the electricity in case of a shut down at the sub-stations. It will benefit the served consumers through these feeders and reduce the shut down time.

According to manager Helder Ferreira, the goal of DL/ML is to achieve the telecontrol of all 214 feeders of the regional until 2012. Nowadays, about 70% of the 214 feeder of the region are already telecontrolled by EA/DOC, benefiting more than 1.1 million customers.

TECHNOLOGY

(FOTO no topo da página)

Cemig exercises ecological concepts to everyday life at *Casa Cor* (Cemig aplica conceitos...)

Cemig took the ecological, environmental and reasonable electricity use concepts, that rules the Company's sustainability actions, to the project of a house at *Casa Cor Minas Gerais 2008*, in Lagoa dos Ingleses, Nova Lima county.

At a multifunctional space of 5x5 meters, the project included all the rooms of a house: bedroom, living-room, kitchen, bathroom and a study room. The supply of electricity for the equipments such as a notebook and a 42" plasma TV, was entirely automatized and the consumption was software controlled. The operation of the light bulbs was managed by sensors that identified the presence of people in the interior of the rooms, in order to optimize its performance.

Architects Júnior Piacesi and Denise Macedo, authors of the project, explain that the side walls of the project are made of glass to take advantage of daylight. On the other walls and furniture, the white color provoked a feeling of space and brightness of the rooms. At the same time, the glasses and mirrors were used to optimize the natural lighting.

To set up the multifunctional space, the Coordination of Income Protection and Use of Energy Management – RC/IP had the aid of the Energetic Technology and Alternatives Superintendence – ET and of Entrepreneurial Communication – EC.

Materials

The rooms and materials of the house are environmentally friendly: eco-blocks, wood recovered from demolition and MDF (wood of reforestation). The eco-block is a material similar to wood, but it is produced from several residues and of the addition of vegetable, industrial and animal fibers. The wood from demolition can be re-used after proper treatment. The MDF, in its turn, is a plate produced from fibers extracted of reforestation trees, such as pine and eucalyptus.

The wall coverings and the carpet were craft made, using 100% of natural silk from the refused cocoon by automatized industry. The coloring of the adornments and accessories was made with natural pigments, such as the chlorophyll without chemical process. The cushions were made with silk gauze with primitive threads and filled up with flakes of PET bottles, promoting comfort and softness.

The appliance of glasses and mirrors instead of masonry provides a feeling of expansion of the rooms, associated with the concepts of hygiene and visual lightness.

In the bathroom, there was also a space for a heating pump that will work on the water heating used for shower, avoiding the use of an electric shower that is one of the house appliances that generates more consumption of electricity at a house. In practice, it works as an air-conditioner to generate hot air or hot water instead of cold air, with advantages in relation to the electric heating or even the solar heating.

CEMIG_{NEWS}

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