

## **PROPOSAL FOR CEPEL AFFILIATION TO ATP USERS GROUP**

### **1. INTRODUCTION**

CEPEL was set up in 1974 by the Ministry of Mines and Energy to be a non-profit organization, aiming at assisting ELETROBRÁS and the Brazilian federal utilities, FURNAS, CHESF, ELETRONORTE and ELETROSUL, as a technological research center of excellence. ELETROBRÁS, the holding company in the federal electrical sector, is CEPEL's main maintainer.

### **2. CEPEL'S MISSION**

***"To contribute for the continuous evolution and adjustment of the electric energy service, establishing new standards of quality, productivity and economicity by means of research, development, promotion and transfer of technology, acting as the excellence center of the Brazilian Electric Sector."***

### **3. HISTORIC**

CEPEL, as a technological research center has to do its best in order to perform its research projects applying the state of the art tools available.

During the 1986 CIGRE Meeting we heard about a group of entities headed by EPRI and with the participation of BPA that would from that date on perform the new developments in the EMTP. Only the participants of the group would have free access to the new versions of the program. To enter to the group the company had to contribute with certain amount of money. CEPEL, as a federal company has many limitations to deal with international transactions, besides that, it was very difficult to obtain financial resources to join the group. At that time we understood that, since BPA had joined the group we would not receive EMTP support or new versions free as before if we were not participating in DCG. So, we thought of offering our expertise to develop some technical activities, since we were not able to participate of the group with a financial contribution.

After some negotiation, in October 1991, CEPEL signed a license agreement with EPRI to have access to the new EMTP versions developed by EMTP Developing Coordinator Group. CEPEL counterpart was a contribution to the development effort of EMTP at the rate of at least twelve and a half man-years during the period of the agreement (December 31, 1994), until the release of EMTP version 3.0.

In order to accomplish with the tasks agreed it was established a project in our institutional portfolio sponsored by the ELETROBRAS and the federal utilities.

This project was active until the end of 1996. In the scope of it the following activities were developed:

- Modeling of corona effect in transmission lines (in cooperation with COPPE from Rio de Janeiro Federal University);
- Field tests in a synchronous machine. The results should have been used for validation of the EMTP model, but this activity was not completed (in cooperation with CEMIG);
- TACS restructuring and bug correction. Specification of the subroutines for D-TACS (in cooperation with IREQ).

By the end of 1996, this project was interrupted because CEPEL sponsors were not interested in collaborate to our budget on behalf of this project. For that reason CEPEL direction decided to stop the participation in the DCG and did not sign the DCG agreement from that date on.

In March 1998, after more than one year out from DCG, we decided, with the formal authorization from the Board of Directors, to submit CEPEL participation in the ATP Latin America users group.

#### **4. CONCLUSION**

We understand that we have never participated in EMTP commerce (defined to be the sale or attempted sale of any electromagnetic transients program).

Our purpose was to continuously have access to new EMTP versions in order to be able to perform studies for the Brazilian Electric companies with the most up-to-date tool according to our mission as the Brazilian Electric Sector Research Institute.

At the time we engaged DCG, BPA was also a DCG member and we did not have information about the ATP and its development. So, at that time, we saw the affiliation to DCG as the unique alternative to have access to an updated EMTP.

**Based on the previous experience related above, the official position of CEPEL is to exclusively use the ATP for the future. It is not our intention to have any involvement with DCG.**