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CIGRE – A Learning Platform in Electric Power Engineering

“Expectations of Industry”

Having been involved in the activities of CIGRE for over 20 years from the perspective of an equipment and service provider I will try and give some insight into the expectations of an industrial organisation regarding the benefits of CIGRE membership and participation for development of electric power engineering education.

I will approach this by discussing:

- Relevance of CIGRE to industry
 - § Alignment of CIGRE goals to typical industrial goals
 - § Commitment of industry to education
 - § Expectations of industry
 - § Required from an organisation
 - § Required by an individual
 - § Benefits of involvement in CIGRE

Relevance of CIGRE to Industry

Siemens, is committed to Power Engineering and this business area is a significant part of the key Energy Sector business for the global Siemens organization which employees some 71,000 people worldwide with revenues over €20Billion.

Siemens fully supports CIGRE as an organization and recognizes that in order to encourage the sustainability of CIGRE that it needs to have processes for engineers to join, participate and fully contribute to the work of CIGRE. This is good for our society of electrical power engineering, good for our individual organization and of course very beneficial for individual engineers. We are fully committed to supporting CIGRE for these reasons and of course believe that CIGRE can play an important role in the development of engineers.

Alignment of CIGRE Goals to Typical Industrial Goals

CIGRE has goals which are centred around

- § Facilitate and develop exchange of knowledge
- § Add value to engineering knowledge by collective work to synthesise and advance technical state of the art
- § Promote work of CIGRE and importance of electrical power systems

These goals are fully supported by Siemens and align with our own goals with connections to ongoing business improvement initiatives. Indeed it is worth mapping these in a little more detail.

In order to achieve and sustain the Siemens core values of:

- § Responsible (committed to ethical and responsible actions)
- § Excellent (achieving high performance and results)
- § Innovative (to create sustainable value).

We have linked individual business improvement programmes which can in turn be aligned to the goals of CIGRE.

The Responsible value is supported by an important part of our corporate citizenship programme which is to help promote engineering and engineering education, an item that will be discussed in more detail as it is really the focus of this EPEE session.

Excellence can be split between people excellence and operational excellence. In people excellence we see CIGRE as a key means of helping to develop our people, leaders and experts. Operational excellence which requires identification and promotion of best practice and state of the art solutions is clearly a major goal of CIGRE. These two objectives being central to the objectives of CIGRE and hence the comprehensive alignment between the goals of CIGRE and a typical industrial organisation such as Siemens.

Commitment of Industry to Education

One of the key issues facing the electric power community today is a general shortage of skills and critically the problems of attracting young people into the industry and even more fundamentally to take an interest in science and engineering subjects during their education.

Siemens has a long tradition of working with schools and universities on educational initiatives and currently the Siemens Generation21 education programme bundles our wide array of activities to support education in preschools, primary and secondary schools, and universities worldwide. In schools and kindergartens, we aim to interest children and young people around the globe in the natural sciences and technology and identify and foster young talents at an early stage. Cooperating closely with institutions of higher learning, we support and foster committed university students with awards, scholarships and mentoring programs. Our wide-ranging education program is just one of the ways we are fulfilling our responsibility to society.

CIGRE has a key role in the development of engineers, normally after University but perhaps a challenge for CIGRE is how it can become more active in the encouragement of science, technology and engineering in pre-university education. It is perhaps at the kindergarten age where the seeds for engineers of the future are sown.

It is clear that following university the role of CIGRE is even more critical in the development of engineers, some of the key aspects being;

- § Access to technical state of the art across all areas of power engineering
- § Help establish personal networks nationally and internationally
- § Provide appreciation of global issues
- § Provide awareness of different cultures and values

§ Foster friendships and experiences

Hence CIGRE helps in providing more challenged, interested, motivated and developed engineers and consequently more effective and fulfilled individuals.

Expectations of Industry

Based on the experience accumulated with several generations of engineers in many technical areas and in many countries it is to be expected that through becoming involved in CIGRE by getting involved in CIGRE;

§ Engineers will be more effective and fulfilled reaching their potential more quickly

Support will be required from their employing organisation to:

§ Provide time, but an engineers time will be split between the company's and the individuals own personal time

§ Financial support (travel etc.)

§ Provide company information as part of input to technical work

Of course there are expectations that need to be fulfilled by the individual engineer by getting involved in CIGRE;

§ Engineers will be more effective and fulfilled reaching their potential more quickly

In order to achieve such expectations the individual should recognise that their personal input and commitment will include:

§ Providing personal time

§ Commitment to deliver for working group/SC deadlines

§ Sustaining effort over years/decades

§ Exhibiting the values of CIGRE

- Openness and sharing of information
- Maintain technical excellence
- Responsibility to promote power engineering

In other words there is “no gain without pain” and the benefits that should be expected require an organization and an individual to make investments. The benefits that can be expected are discussed in the next section.

Benefits of Involvement in CIGRE

From the perspective of an industrial organization the benefits of CIGRE involvement can be summarized as

§ Assists significantly in the development (technical and personal) of an engineer.

§ Raises awareness of global issues and provides a different perspective

§ Establishes unique personal networks (colleagues, customers and competitors) with bonds based on common values.

§ Provides awareness of different cultures and values

§ Allows individual access to a wide range of technical information, sometimes challenging internal practices and customs.

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§ Stretches individuals providing intellectual challenges

In summary engineers who can be more effective and more engaged in their professional development.

Many of the benefits that an organization sees from the involvement in CIGRE are reflected from the individual's perspective

- § Access to technical information
- § Professional networking
- § Assisted individual professional development
- § Attendance at CIGRE sessions and events
- § Opportunity to foster friendships
- § Opportunity to travel and visit interesting technical and cultural locations

Summary

In summary the success of CIGRE is that the commitments and expectations of those involved are balanced.

Organisations have to make commitments supporting the CIGRE activities of individual employees but these commitments are repaid due to the benefits that can be expected.

Equally the commitments of time and effort from individuals can be substantially returned over the career of an individual.

As long as this fundamental balance is maintained the sustainability of CIGRE should be ensured and the key role of CIGRE in the development of power engineering education can be maintained.