




**THE
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PROFESSIONAL
ENGINEER



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of the
province of manitoba**



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Opinions expressed are not necessarily those held by the A. P. E. M. or the Council of the A. P. E. M.

WINNIPEG, MANITOBA, NOVEMBER, 1975

President's Report

By D. R. GRIMES, P. Eng.

This is the last opportunity I have to address the membership through this column. The natural inclination is to review the actions of Council in the past year and try to anticipate the direction the Association is taking. Although many of my objectives have not been reached, a direction is apparent.

The major work of Council is, as always, the unrecognized day to day function of maintaining standards of practice through vigilant review of the activities of members and the registering of new applicants. This is our primary purpose, and the work is effectively pursued. In the past year membership has grown from 2039 to 2196, a healthy and continuing growth.

The main thrust of our year's work has centred around the dilemma of the Salaried Engineer. Buffeted by inflation on one side and on the other by attempts of the militant white collar unions to absorb him, the salaried engineer sees little concern for his plight by management, even when management is represented by fellow engineers.

Council has presented and has strongly

endorsed the new salary recommendations as a means of supporting the Engineer in negotiating compensation with his employer. It provides an alternative to the appeals from labour unions.

Council is also providing encouragement to groups of engineers with a common employer, where these groups have formed bargaining units. We want to ensure that these units remain free of big union domination. I am confident that the groups of Professional Engineers will negotiate responsibly, and will be well received by management. They do not need big union support and would certainly be damaged by the union approach to negotiations. The battle to remain separate is just beginning.

The large unions are prepared to battle fiercely to absorb our members and have financial resources that our members cannot match. We must remain vigilant.

It must appear to many members that our Association is too active in Employee matters. I firmly believe the direction we are taking is in the best interest of the total community and the profession as well.

Managing Director's Report

During the last twelve months, the Association has experienced a *net* membership increase of approximately 160. This figure is significant if compared to the past average *net* growth of 68 members per annum. A better indication of Professional awareness in the Province lies in the fact that 260 new members were added to the rolls.

Expenses for the year were close to the budgeted figure, but because of the increased registration, together with requests for assessment of academic qualifications, revenue well exceeded the budgeted figure. The registration and assessment activity shows no sign of a let-up, and this important Association function is presently consuming the greatest percentage of available staff time.

Council, Committee, and Ethics meetings, plus meetings with related groups continue to be required at closer intervals. There is no shortage of good ideas or intentions, but there is a limit to the amount of time available to the Councillors, Committee members and present staff, to enable all proposed programs to be carried out. Priorities remain in the following order: surveillance of registration and licensing standards; enforcement of the Engineering Profession Act; membership services. Do we become a larger organization to more adequately deal with, and extend our priorities, or do we continue to rush, too late, from fire to fire, reacting to pressures too great for our team to match? In my opinion, we have a good quality team, but it is too small to equal the internal and external demands.

Looking back over the last few years, we have done an acceptable job in maintaining registration standards, and our Board of Examiners has remarkably kept up with the mass of assessments. To our membership services have been added the Salary Schedule Recommendations, The Engineers Registered Retirement Saving Plan, the availability of overseas tours, and the moral support to groups of engineers finding it necessary to bargain collectively or to prevent absorption by unions. In the enforcement area, we have not done so well. We have been able to deal successfully with cases of illegal practice or terminology in the private sector and our Practice and Ethics Committee has the ethics of our own members well in hand. We have *not* been successful with the enforcement of

our Act within the Provincial Government, the Government which grants us the authority under Provincial statute. A somewhat similar situation exists in Federal Government Departments or crown corporations where some engineering employees are of the opinion that they enjoy "federal immunity". Recent Labour Board hearings have indicated that the informed public remains largely ignorant of the Engineering Profession Act, and of the true objects of a Professional Body — little wonder the desire of some for a self-interest group. We have a great deal of enforcement work to do, but education of the public will reduce the enforcement work necessary.

Subjects dealt with, or under consideration by Council, include: a more aggressive enforcement policy; input to Provincial or Federal Legislation; co-operation with and assistance to the University of Manitoba Engineering Faculty, and the UMES; the teaching of engineering subjects; the supply and demand of engineers; improved Engineering Graduate programs; C.C.P.E. items including a National Committee for Salaried Engineers, and the Kipling Ritual Ceremony for registered engineers rather than for new graduates; promotion of local or Canadian engineering services; extension of the public relations program to increase the public's awareness of the Engineering Profession; licensing observance by non-residents; involvement (or not) in the Labour Relations field; Council members presence in engineering centres other than Winnipeg; extent and variety of members services. Your 1975 President and Council have accomplished a great deal. There will always remain much to be done.

Members who have visited the office lately will note that Maggie Brownie is now holding the fort for the Architects. Although Maggie is now employed by the M.A.A., she is still close at hand to answer the odd question from our new staff member, Barbara Nicholls. I wish to express my appreciation for the work accomplished by the members of Council and its Committees, and my thanks for the loyal support of Loreen Dunklee, Monica Todd and Barbara Nicholls.

Respectfully submitted,

T. W. ALGEO, P. Eng.

Managing Director &

Registrar

PRACTICE AND ETHICS COMMITTEE

"All Engineers registered or licensed in Manitoba are required to comply with the Code of Ethics of the Association of Professional Engineers and carry on their practices in accordance with the highest standard of professional conduct. Failure to do so is considered a breach of duty and deemed to be unprofessional conduct."

The foregoing quotation comprises the preamble to one of the most important if not *the* most important by-law of the Association of Professional Engineers of the Province of Manitoba. These few simple lines constitute the obligation assumed by *every member* of this Association upon registration and form the rules by which *each member shall* conduct his or her practice of our profession in this province.

The responsibility of your Practice and Ethics Committee as stated in the by-law is as follows:

The Committee may, when consulted, advise members of the Association who inquire on questions of proper professional conduct, reporting on its deliberations to the next meeting of Council.

The Committee shall consider all complaints received in writing against members of the Association. It shall be charged with the responsibility of making the necessary investigations and where it deems necessary may cause a complaint under oath to be filed with the Registrar, and present the evidence before Council.

Without the co-operation of the membership as a whole, the efforts of this Committee and the Council of the Association in carrying out its duties as set forth in the "Engineering Profession Act" would be negated.

The phrase "ignorance of the law is no excuse", applies equally as forcibly to the "Engineering Profession Act" as it does to those laws governing our conduct in society. A periodic review of the Act, by-laws and Code of Ethics of our Association is not only informative and interesting, it is an obligation of a truly professional member of the Association of Professional Engineers of the Province of Manitoba.

Your Practice and Ethics Committee held twelve (12) regularly constituted meetings during the course of the past year. The

Committee has considered five cases during its deliberations, four of which were complex and time consuming and one relatively routine. The latter case was one in which an Engineering Consulting firm was deemed to have gone beyond the generally accepted guidelines for professional advertising. The firm involved was contacted in an appropriate manner. The present guidelines are being reviewed at the National level with a view to making them less restrictive but remaining within the bounds of professional propriety.

The four major cases considered involved the following:

1. Purported violation of the Code of Ethics;
2. Purported negligence in the practice of engineering;
3. Purported improper use of a professional seal;

and combinations of the foregoing.

In all of the latter cases, it has been necessary for Committee to seek consultation with the Association's legal counsel, outside legal counsel, and professional engineering expertise. In three of the four cases, personal interviews with involved members of the Association were necessary to the investigatory procedure.

The review of a case is normally undertaken by a member or a sub-committee of the Practice and Ethics Committee. The report resulting from the latter review is then considered by the Committee and the requirements for further investigation or action are determined. It is an extremely time-consuming task to carry out an investigation but it is imperative if the welfare of the public and the members of the Association are to be adequately safeguarded.

Your Committee has caused one complaint under oath to be filed with the Registrar and it is now before Council for its consideration and action.

In addition to the normal business of the Committee, the Council has been requested to obtain from the Association's legal counsel an opinion on the implications of Corporate Practice in the Province of Manitoba as is provided for in many of our sister associations.

I wish to take the opportunity of expressing my appreciation of the untiring efforts of the members of the Practice and Ethics Committee in carrying out our re-

sponsibilities and to Council for its cooperation and support. A special thanks on behalf of Committee to our General Manager and Registrar and his staff for their continuing assistance.

The members of the Practice and Ethics Committee for the year 1975 are as follows:

L. A. Buhr, P. Eng., D. A. J. Ennis, P. Eng., C. R. McIntyre, P. Eng., F. Penner, P. Eng., R. Hood, P. Eng., T. E. Weber, P. Eng., F. M. Fowler, P. Eng., Vice-Chairman.

Respectfully submitted,

W. H. FINNBOGASON, P. Eng.,
Chairman

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SALARY SCHEDULE COMMITTEE

Since the March 3, 1975 special meeting of the Association, at which meeting the membership endorsed the "Recommended Salary Schedule" to be effective July 1, 1975, the committee held three meetings.

Mr. Ray Sochaski did an admirable job as the founding Chairman of the then so-called "Compensation Study Ad Hoc Committee." All salaried engineers of our Association owe Ray and his committee members a sincere vote of thanks for getting the work started.

The Council of our Association, at their regular meeting held June 12, 1975, gave the Committee full status by removing the "Ad Hoc" nomenclature and recognizing us as the "Salary Schedule Committee."

Subsequently, the Committee, at its meetings, agreed that the management consultant's offer of continued service would not be accepted and a sub-committee was appointed under the chairmanship of Mr. R. K. Shemie. The sub-committee worked hard all summer and produced an excellent document for the Committee's consideration at a meeting held September 16, 1975. Their hard work during the summer months made it possible to make some definite recommendations to Council. Two resolutions, unanimously approved for information and consideration of Council, were that:

- (a) having now established the validity of the 1975 salary schedule, it is recommended that the schedule for 1976 should recognize the increase in the overall productivity in the province, as well as the estimated inflation,

and

- (b) the points rating system should be recommended for application by employers and further work should be undertaken to establish common job definitions for the points rating system to be used across the country.

It is hoped that the hard work put in by the Committee members will culminate in the endorsement of the "Recommended Salary Schedule, effective July 1, 1976" by the membership at our next annual meeting in November.

Finally, there was a recommendation for consideration of the new Council that the Salary Schedule Committee continue its work during the winter months in order to permit more research time and to enable finalizing its recommendations in good time for consideration by employers and employees in their review of salaries.

Any volunteers willing to serve on the Committee, please contact the Association office.

Respectfully submitted,

G. A. DE PAUW, P. Eng.
Chairman

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BOARD OF EXAMINERS

Serving on the Board during the 1975 term were:

K. M. Adam, D. T. Anderson, J. R. Cahoon, J. B. Campbell, E. A. Bridges, W. P. Fraser, G. E. Laliberte, G. A. Morris, M. P. Musick, K. R. Ouelette, G. W. Swift, A. B. Thornton-Trump, J. Tinkler, J. D. Wiebe.

During the year the Board convened for four meetings to consider 50 applications for assessment of academic credentials. The comparable numbers for the previous years of 1974 and 1973 respectively were 31 and 37. Sixteen applicants were found in possession of sufficient academic credits to be recommended for registration — of which six were required to substantiate the credentials upon which the assessment was made. Seven were assessed from one to four confirmatory examinations to demonstrate their academic competence before a final recommendation is made. Twenty-four were assigned from five to fifteen examinations to fulfill their academic requirements. The remaining three applicants were prescribed from one to four examina-

tions in engineering fundamentals, upon completion of which a final examination program can be determined.

Examination periods were held in October 1974 and April 1975. In October, two individuals wrote one paper each with one success and one failure. In April, eleven individuals sat for 17 examinations. Nine papers received a passing grade and the remaining eight were failures.

One candidate, assessed in a previous year, appealed for exemption from examinations and upon a reassessment of his case the appeal was denied.

Four candidates requested and were granted privilege to write University of Manitoba engineering examinations in lieu of APEM papers after the Board determined appropriate substitutions.

On policy matters the Board, after study and debate, (a) concurred in principle with the Canadian Accreditation Board's Accreditation Criteria and advised C.C.P.E. of changes that would satisfy the A.P.E.M., (b) passed a motion whereby the A.P.E.M. would accept the number and nature of examinations prescribed a candidate by another Provincial Association/Order should the candidate wish to complete his examination program with this Association and (c) accepted as sufficient for academic accreditation those courses appearing on the Canadian Accreditation Board List of August 1974.

The Board gratefully acknowledges the assistance of the Registrar, T. W. Algeo for his able insights on difficult assessments, Miss M. Brownie and her successor Mrs. B. Nicholls, for their secretarial participation during Board meetings and the necessary pursuit of details for a proper completion of tasks.

I extend my personal thanks and gratitude to all those mentioned, to the dedicated members serving on the Board and to the Association staff for their co-operation and assistance on Board matters.

Respectfully submitted,

M. P. MUSICK, P. Eng.
Chairman



LEGISLATION COMMITTEE

Members of the Committee:

R. Haywood, A. D. Myska, D. L. T. Oakes, G. R. Smith, D. A. Crocker, G. R. Durnin, G. E. McLure, R. A. Harasyn, J.

R. Spronken, E. E. Lach and R. A. Johnson.

Activities of this Committee were light during the past year, and dealt with only one matter referred to it by Council; namely the matter concerning the review and/or revision of one engineer's work by another. No outstanding business remained at the time of writing and it is hoped that this reflects more settled times rather than the lull before the storm.

At this time we would like to thank all members of the committee who have generously donated of their time, and express our gratitude to the staff of the Association for their unfailing assistance.

Respectfully submitted

J. R. SPRONKEN, P. Eng.
Chairman



CONSULTING ENGINEERS COMMITTEE

This committee has met monthly in 1975 to consider various aspects of a professional nature dealing with the practise of Consulting Engineering. This year there were a number of items to be concluded and dealt with, which were initiated in 1974, as well as a number of new items passed to this Committee by Council or brought before it by the members.

The following is a list of some of the more important items dealt with or which are in progress:

1. Revisions to the Standard Form of Client/Engineer Agreement dealing with specific technicalities for use with the Winnipeg School Division. After several meetings and discussions with Mr. W. Enns of the Winnipeg School Division, and review by their solicitor and our solicitor Mr. Abe Anhang, agreement was reached and these changes are now to be incorporated into contracts with the Winnipeg School Division.
2. The review of Professional Liability Insurance coverage for Provincial D. P.W. projects was continued in a special sub-committee chaired by Bob Morrison. An alternate insurance program is being investigated by D.P.W. whereby all inclusive insurance would be taken out for a specific project to cover all risks with Consultants' own protection remaining under present general coverage for Professional Liabi-

lity. There was considerable discussion regarding minimum insurance coverage and maximum limits. No further action is being taken on this matter pending above review and study by the Government re policy for insurance.

3. Continued discussions with the Dept. of Education and held a special meeting re the use of Consulting Engineers. This culminated in a letter of recommendation which was approved and passed by Council in which the use of Engineering Consultants is encouraged for Provincial Department of Education Building Projects and a Consulting Engineer is named for a project along with or by the Architect.
4. Recommended to and received approval from Council for APEM to participate in the activities of the National Consulting Practise Committee of CCPE.
5. Chairman represented Manitoba at two meetings of National Consulting Practise Committee held in Ottawa in March and September of 1975. Major items dealt with at these meetings were the recommended standardization of fee schedules across the country, forms of agreements, liability insurance as well as other items of common interest.
6. Reviewed and endorsed CCPE Policy Statement on Utilization of Canadian Engineering Capabilities with recommendations for publicity to Council.
7. Met with representatives of Management Committee of Cabinet as requested to review a particular clause in Standard Form of Agreement dealing with Payment of Fees when a project has been shelved or terminated. This matter is still under review.
8. Discussed and recommended various items for standardization of fee schedules. These recommendations were carried by the chairman to the National Committee Meeting in Ottawa on September 29 and 30, 1975.
9. Initiated the preparation of a guideline to be used in conjunction with the Standard Form of Agreement by a Sub-Committee to be chaired by J. P. Sinclair.

I would like to thank the members of this Committee for their time and work on this Committee and to Terry Algeo and Allan Moffatt (APEM Liaison Councillor) for their assistance and guidance.

Committee members:

Wm. Hanuschak, Chairman; J. P. Sinclair, G. H. Currie, W. H. Mitchell, E. Weiszmann, A. W. Knight, D. G. E. Berry, B. J. Rossen, Vice-Chairman; J. Hunter, A. Penman, Robt. Morrison, J. L. Babletek, J. G. Malus.

Respectfully submitted,

WILLIAM HANUSCHAK, P. Eng.
Chairman



CANADIAN COUNCIL OF PROFESSIONAL ENGINEERS AFFAIRS COMMITTEE

The Terms of Reference of the Canadian Council of Professional Engineers Affairs Committee require that the immediate Past President of your Association act as Chairman. Precedence has also established that the Past President become the Director for Manitoba.

As your representative on C.C.P.E., I attended two meetings of C.C.P.E., one in November 1974 and the last meeting of the Board of Directors held on May 8 and 9, 1975.

Perhaps the best way to briefly let you know what the C.C.P.E. does for you is to print a copy of the information I received from C.C.P.E. headquarters and make brief comment regarding some of the items listed therein.

Therefore, reprinted herein is the:

- (a) Preliminary Budget — 1975 and 1976 (with explanatory notes);
- (b) Breakdown of Budget by Programmes or Activities;
- (c) Preliminary Agenda.

Your Association introduced two items for consideration, now listed in the Agenda. These are the "Iron Ring Ceremony" and the "National Committee of Employee Engineers."

The first item was proposed to have the National Executive of C.C.P.E. approach the Corporation of Seven Wardens in order to discuss the possibility of a modification in the current procedures for granting of the Iron Rings. It is our opinion that only registered Professional Engineers should be allowed to wear the ring, the symbol of the Engineer in Canada.

Your Council had requested that C.C.

P.E. executive be authorized to set up a national committee of salaried engineers on the same basis as the National Committee on Consulting Practice. A motion to that effect had been defeated at the May 1975 annual meeting on the grounds that the same general terms of reference approved for the Consulting Practice Committee were not necessarily suitable for the Employee Engineers Committee. Therefore, the item is back on the agenda for consideration with revised terms of reference.

Your Director has opposed the formation of the Engineering Manpower Council, costing about \$15,000.00 annually, because it is my belief that the sincere effort by contributing and participating members will be futile. The information published will neither influence the ups and downs of the "supply and demand" for engineers, nor work for the benefit of the engineers seeking employment. It is something akin to salary surveys.

A glance at the rest of the Agenda items and funds allocated for various activities will show the importance placed on the work of the Canadian Accreditation Board. This is as it should be, since the effectiveness of the Board's endeavors greatly influences the quality of the engineering education in Canada and sets the standards for the recognition of those ultimately wishing to become registered Professional Engineers.

Another project which merits support by all is the public relations programme. A combined effort on a national basis must be more effective and cost less. The question being asked by C.C.P.E. Executive is whether or not a new film should be sponsored with the primary objective of publicizing Canadian engineering capabilities or one showing what an engineer is, what he does, how he relates to others, and how he (she) is able to make the best possible use of resources. What do you think would be best?

There are many areas where a national council can be of great benefit to our profession. However, I get the feeling that C.C.P.E. must become more concerned about the welfare of the Engineer who pays for its operation than the welfare of those managing and selling our services for profit.

Respectfully submitted,

G. A. DE PAUW, P.Eng.,
Chairman

CANADIAN COUNCIL OF PROFESSIONAL ENGINEERS PRELIMINARY BUDGET — 1976

	Budget 1975	Budget 1976
Salaries and Staff		
Benefits	\$123,000	\$136,000 ¹
Rent and Taxes	11,300	11,500
Office Supplies and		
Printing	8,000	9,000
Communications	5,500	6,000
Canadian Accreditation		
Board	15,500	16,500 ²
Executive and		
Staff Travel	23,500	27,500 ³
Public Relations	4,500	5,000
Committees	6,500	6,000
Publications	5,000	5,000
General Meetings	18,000	18,000 ⁴
Professional Fees	2,000	2,500
C.E.M.C.	6,500	6,500
General Expenses	3,000	3,000
Insurance	400	500
Depreciation	2,000	2,000
	\$234,700	\$255,000

REVENUES (Estimated)

Assessments	\$225,000	\$237,000
Other	\$ 15,000	16,000
	\$240,000	\$253,000
Excess of Revenues over		
Expenditures	\$ 5,300	\$(2,000)

PROPOSED ASSESSMENT

The Executive Committee recommends that the per capita assessment for 1975 be continued for 1976. However, the Committee estimates that it will be necessary to review the assessment for the year 1977.

EXPLANATORY NOTES

- 1) Covers third senior officer for a full year, plus anticipated salary adjustments for existing staff.
- 2) Increased activities in 1976 to be offset at least in part by contributions from universities.
- 3) Reflects increased cost of travel.
- 4) Increased travel costs offset by lower transportation costs for a Montreal meeting.

BREAKDOWN OF BUDGET BY PROGRAMMES OR ACTIVITIES

Due to the wide variety of activities of CCPE, the continuously shifting priorities, the frequent unforeseen or unpredictable requirements arising out of government activities, requests of the constituent associations and other factors outside CCPE

control, emergence of new problems, etc. . . . , it is very difficult to break down anticipated expenditures for the coming year and even actual expenditures of the past year on a programme or activity basis.

We have attempted, nevertheless, to do so in part as an indication of the total cost (actual expenditures plus salary and overhead costs) of some of our programmes and activities.

The following is an indication of anticipated total cost of these programmes for 1976, based on past experience and anticipated decisions of the Board of Directors and Executive Committee and assuming the adoption of the proposed budget. Please note that whereas the first six items are reasonably estimated, the other five items may vary considerably depending on unpredictable circumstances.

BUDGETED EXPENSES

	1975	1976
Canadian Accreditation Board	\$45,000	\$50,000
*Insurance Programme ..	14,700	15,000
Canadian Engineering Manpower Council....	14,500	15,500
Publications	15,000	20,000
Meetings — Board of Directors	28,000	33,000
Meetings — Executive Committee	18,500	21,000
Other Committee Activities	19,000	22,000
Federal Legislation, Policies & Relations	23,000	30,000
International Activities	9,000	10,000
Public Relations	12,000	15,000
Other Miscellaneous Activities	36,000	23,500
TOTAL	\$234,700	\$255,000

(* — Recovered entirely from insurers)

CANADIAN COUNCIL OF PROFESSIONAL ENGINEERS BOARD OF DIRECTORS MEETING NOVEMBER 13—14, 1975 PRELIMINARY AGENDA

- 1 — Executive Committee — Report
- 2 — Canadian Accreditation Board
 - 2.1 Semi-annual Report
 - 2.2 Revision of Terms of Reference, Criteria and Procedures
 - 2.3 Definition of Teaching of Advance Level Engineering Subjects
- 3 — Canadian Engineering Manpower Council — Report
- 4 — Committee of Permanent Staff Officers — Report
- 5.— National Committee on Consulting

- Practice — Report
- 6 — National Committee of Employee Engineers — Terms of Reference
- 7 — Relations with ACEC
- 8 — Joint International CCPE-NCEE Committee
- 9 — Code of Conduct for Professional Advertising — Revision
- 10 — Utilization of Canadian Engineering Capability — Progress Report
- 11 — Competition Legislation — Progress Report
- 12 — Relations with CCETT
 - 12.1 Profile of an Engineering Technologist
 - 12.2 Reports of developments by provinces
- 13 — Iron Ring Ceremony — Progress Report
- 14 — Proposed National RRSP Program — Progress Report
- 15 — Group Insurance Program — Report of Committee
- 16 — National Award Program
- 17 — Budget and Assessment — 1976



EMPLOYEE ENGINEERS COMMITTEE

The Employee Engineers Committee consists of the following members during 1975:

F. A. Jost, I. B. Henderson, R. C. Mills, J. P. Stefanson, N. Fedorchuk, D. Delgatty, C. V. Robinson, T. Gaul, A. D. Myska, G. G. Marshall, W. G. Rooke, R. W. Hutchinson and E. F. Glass — Council Liaison Member.

The Employee Engineers Committee met regularly during the year and had many very comprehensive discussions on its functions, its immediate tasks and related subjects. As might be expected, a considerable amount of time was spent on the topic of the needs and proposed functions of a self-interest group. The following specific action resulted from those discussions.

The Committee was asked to and assisted Council in the preparation of the Questionnaire regarding the need for a self-interest group. The Questionnaire, finalized by Council, you all received, and a few of you took the time to respond to it. As a considerable part of our work from time to time involves degrees of self-interest, we decided to suspend any further detailed consideration of proposals in this area until such time as the replies by the membership could be received and analyzed for any appropriate action that might be indicated. As the information has only re-

cently been received, this action is not anticipated now until early next year.

We received a request to investigate the possibility of preparing a draft working agreement which could be used by an Engineer as the basis of his working arrangements with his employer. Such an agreement is not intended to supplement the working arrangements in organizations employing a fair number of Engineers, but is intended to serve as a reference to assist those Engineers who find themselves being the only Engineer or perhaps in a small group working for an employer in assessing the adequacy of their working relationships with their employer(s). We are presently attempting to obtain copies of similar agreements which have been in use for some time elsewhere to serve as references in the drafting of such an agreement.

At our meeting, immediately prior to writing this report, we agreed that we, as a Committee, would make the following recommendations for the future activities of this Committee and its working relationships within the Association.

We would recommend that the Committee continue to serve as a vehicle within the Association to receive, transmit, and/or act upon requests for activities and for services put forward by the membership, and particularly the employee engineers in our membership.

In particular at this time, we would also recommend that the Committee pursue the steps necessary to create the means within the Association to provide the additional services identified in the replies to the Questionnaire recently received.

As a supplementary recommendation to assist this Committee and, perhaps all Committees, in their work for the Association we would stress that good two-way communication between the Committee and Council is an absolute necessity if the system of Council - Committee work relationship is to achieve its purposes. We would, therefore, recommend that the Liaison Officer system presently in use has been a very useful method of achieving such communications to date, and anything that Council could do to bolster or augment such communication channels would be most useful in this regard.

We would also like to thank the Association staff for all of their efforts, assistance, and consideration given during the year.

The above constitutes the Committee's report on its activities for this year and is

respectfully submitted for your information and consideration. However, I would be most remiss in my duties as Chairman of the Committee, if I did not pass along my thanks to the members of the Committee for their time, efforts, assistance, and consideration during the year. Thank you fellows.

Respectfully submitted,

D. S. SIMONS, P. Eng.
Chairman



PUBLIC RELATIONS COMMITTEE

The Public Relations Committee this year recognized that its greatest priority was to obtain greater recognition in this Province for the Engineer and the Profession. To this extent, we explored various ways and means by which the image could be conveyed to the public at large.

Considerable effort was directed to the municipalities and, at the level of the Provincial government to distinguish the difference in the duties and responsibilities of a professional engineer versus engineering technicians. To a great extent, this effort must continue if we are to maintain a professional status within this Province. It was this controversy which led to a letter being drafted over the President's signature and forwarded to all of the municipalities outlining the purpose of our Association and the role which we play in the administration of our Act.

The services of a professional public relations consultant, Mr. Wilf Chislett, were employed and, under this guidance, a public relations program around the profiles of engineers with distinguished careers was considered. One article which received acclaim was that of the career of Major J. L. Charles which was published in the Winnipeg Free Press.

This program was intended to publicize other engineering achievements and current events pertaining to the engineering profession.

Further involvement of Mr. Chislett in the preparation of releases, particularly that of profiles of engineering careers was rejected at Mr. Chislett's suggestion as this was not considered to be a marketable commodity to the news media, even when it was offered for free!

Attempts were made to co-operate with the Slide Rule Publication at the University of Manitoba and, it was agreed that the Association place an ad in this publication

to enhance our position at the student level.

The achievements of this committee have been frustrated by the relative lack of interest of the general public of engineering functions. The building of roads, buildings, electricity transmission, etc. all are taken for granted and, it seems that unless a controversial disagreement surrounded by disaster or government intervention occurs, members of the public are generally apathetic to our efforts. From the Ritual of The Calling of an Engineer, we should be reminded that such is our destined plight in life.

I would like to take this opportunity to thank those who served on this committee with me, B. K. Johnston, S. Donison, R. R. McKibbin, P. Stewart-Hay, B. J. Haller, W. P. Wolfe, H. C. Sage, G. S. Langman, W. C. Fisher and, the previous chairman, H. B. McLenaghan, and, of course, Mrs. Loreen Dunklee whose stability and undying encouragement maintained the Committee in motion.

Respectfully submitted,

B. D. NORRIE, P. Eng.
Chairman

♦ ♦ ♦

UNIVERSITY LIAISON COMMITTEE

The committee is set up to ensure a relationship between practising engineers and the academic staff. Also to assist in the development of the activities of the engineering faculty relating to the future needs of society and the engineering profession. These goals are being met, though not necessarily as a result of the committee, in the following ways:

- a) there are outside engineers on the curriculum committees
- b) outside engineers attend Faculty Council Meetings
- c) there is an annual meeting between council, the Dean, and department heads.
- d) each department is evolving activities which call for more and more participation by outside engineers in educational programs.
- e) Association membership stands at 65 out of 70 academic staff with a target of 69 out of 70 set for March 1976.
- f) Academic staff continue with a high level of representation on the Association's committees.

Participants in the committee are W. P. Beley, R. M. Fraser, G. Grief, R. J. Karras, P. A. R. Lowe, M. Melnyk, W. R. McQuade, A. B. Thornton-Trump, K. H. Williamson. Mrs. Dunklee was our beloved mentor.

Respectfully submitted,

J. W. J. LEWIS, P. Eng.
Chairman

♦ ♦ ♦

SPORTS COMMITTEE

Two events were run off by the Sports Committee in 1975. These were:—

1. 1975 APEM Bonspiel was held January 14, 1975 at the Granite Curling Club. 16 rinks participated.
2. 1975 APEM Golf Tournament was held June 18th at John Blumberg Golf Course. 78 members and guests participated.

Certain difficulties were encountered in obtaining sufficient curling ice on one day to accommodate all the members who wished to participate in our bonspiel. Due to the closing of the Highlander Curling Club, rental ice was at an absolute premium, and it was impossible to obtain sufficient ice on one day. As a result, the bonspiel was limited to 16 rinks.

The Sports Committee members were Bruce Newton, Carl Kummern, Ron Gordon and Ted Parent. My thanks to those people for their assistance during the year.

Thanks, also, to Boris Hryhorczuk for producing our notices, and thanks to Maggie Brownie and Monica Todd for their able assistance and hard work on our behalf.

Respectfully submitted,

W. B. MACKENZIE, P. Eng.
Chairman

♦ ♦ ♦

BULLETIN COMMITTEE

Another year of fellowship has gone by on the Bulletin Committee. This genial group regretted the loss of the only female cub reporter to greener fields. The old stand-bys are listed on the Bulletin masthead (q.v.) along with some welcome new blood.

We've had a good year, stayed within the budget by cutting back on one issue (you noticed!) and by buying the paper for next year's issues in advance, as we did last year.

No lawsuits this year — nomatter how hard we tried. We were concerned that we received no comment on our revelation of C.C.P.E. budget "hanky-panky", but we'll continue, Council willing, to call 'em as we see 'em, hoping you out there in APPEM land will respond if we strike a responsive chord.

The big advantage this committee has is having Loreen Dunklee to guide us through the shoals of mixed metaphors, missing commas and dangling participles. Again our thanks, Loreen.

Respectfully submitted,

EDWARD A. SPEERS, P. Eng.
Chairman

★ ★ ★

RESEARCH COMMITTEE

We received no requests from Council; No suggestions from members; No meetings were held.

But this doesn't mean that individual members were not active on our favourite subject. Activities involved the Biomass Research Committee; the establishment of the Solar Energy Society; work on the Manitoba Alumni Research Foundation; and further effort toward establishing industrial research and development as an operation outside of government and outside the University.

Co-ordination between these groups and with the new Office of Industrial Research at the University of Manitoba continues.

Much needs to be done. A great effort is needed in the Solar Energy field, and in Biomass in the conversion of lignin and cellulosic materials to the chemical building blocks of gases and oils. The growth of secondary industries from needed innovations will help every branch of engineering.

Respectfully submitted,

EDWARD A. SPEERS, P. Eng.
Chairman

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AWARDS COMMITTEE

The Awards Committee recommended to Council names of members of the Association the Committee considered deserving of the Outstanding Service Award, the Merit Award and the Honorary Life Membership.

The Chairman of the Committee fulfilled

his duties as Chairman of the Northlands Development Committee.

I wish to acknowledge the contribution made by the members of the Committee, G. A. De Pauw, S. Barkwell, R. Hood, J. D. Adam and F. M. Fowler and also that made by Monica Todd of the Association staff.

Respectfully submitted,

C. R. McBAIN, P. Eng.
Chairman

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COUNCIL MEETINGS

September 11, 1975

The regular business of accounts, licences, engineering graduates, transfers and registrations proceeded smoothly. The only question was the matter of registrants working for investment and business management companies which on the surface at least, do not include engineering functions. It was agreed that if the registrants fulfilled the requirements they should be registered.

In the matter of an engineer working in Brazil who had arranged for payment of his annual dues by his head office which, because of "breakdown in communications" had failed to pay the dues and had been written off for non-payment by our "ice-in-veins" office staff, Council broke the rules and reinstated said engineer. The matter is further complicated by the fact that other engineers have been written off and told they could not be reinstated because they were non-residents. Council briefly pondered reconsidering the present policy of not reinstating non-residents who had been written off for non-payment, but Council pondered only. No action was taken.

In the membership and third quarter financial report Council learned that the membership had grown some 23% in the past 5 years and that a small year end surplus could be expected. The Association appears to be healthy, at least as far as members and money go.

In view of the heavy problems of engineering group certifications, self-interest groups and the like, the slight departure to discuss Professional Seminar Consultants Inc. Tours to the Spanish Riviera was a welcome relief, particularly when such professional tours include continental breakfast every morning, lunch or dinner daily, sightseeing tours and best of all "open

bar — unlimited drinks all week". Which profession the tour is supposed to be of is not stated.

The big item of the meeting were letters of resignation received from two engineers presently teaching at Red River Community College. The resignations were triggered by the recent ruling of the Labour Board which, although certifying OPEEPM (Organization of Professional Engineers Employed by the Province of Manitoba) as a voluntary group exempted the teachers at Red River Community out of the group because they could not demonstrate that the teachers had a community of interest with the engineers working for the provincial government. This put the engineers who are teaching at Red River into the unenviable position of not having any bargaining group to belong to, as professional engineers are specifically excluded from being members of MGEA (Manitoba Government Employees' Association), a group which the Red River people would normally be with. The Labour Board appears to be bent on a course of belittling our profession and making a monkey of our act.

Council did not accept the requested resignations and passed a motion to the effect that the APEM considers the teaching of engineering subjects to be the practice of engineering, and therefore anyone teaching engineering subjects while not registered would be considered in contravention of the act.

As a part of the discussion and argument in favour of the motion Councillor De Pauw, as a spectator at the Labour Board hearing, recited a horror story of a hearing which allowed the MGEA to intervene against the OPEEPM certifications even when MGEA specifically excludes engineers; a hearing at which the Board discontinued the hearing record and scoffed at our profession, our roster and made off-hand comments to the effect that our Association was a social club. The Board seemed to discount all the evidence that showed how teachers at Red River are required to be professional engineers. The fact that advertisements for such teachers require them to be Professional Engineers did not seem to matter. In summation Councillor De Pauw seemed to be reporting on a hearing before some sort of dictatorship, not before a Board which has been set up by a government elected by the people, including engineers.

The whole tenor of our present government regarding professional people seems

to be one of degrading the professionals as some sort of money grubbing, self-centered people all belonging to exclusive clubs. Perhaps the "professional" politician in power should look to the progress this province has made in the fields of medical science, the performing arts, engineering, etc. to realize this progress requires dedicated professionals, not people bent on self interest alone. This very progress is the subject of many a glossy industry and commerce brochure and if it were not for the professional the brochures would have nothing to talk about.

Council concluded the general discussion by requesting the lawyers for OPEEPM to prepare a write-up of the certification proceedings and the results.

Another item of business which has been the subject of discussion, debate, argument and a questionnaire was laid to rest when Council went along with the majority and voted to drop the matter of a self-interest organization.

In the continuing struggle with CCPE Council was strongly opposed to the Profile of an Engineering Technologist as it is almost an exact description of a professional engineer. Council also turned down a CCPE recommended National Registered Retirement Plan since APEM had adopted the Great West Life Plan and there were no apparent benefits to changing plans. Council also turned down a request from the Consulting Engineers Committee for \$250.00 to participate in a study concerning a Standard Form of Agreement which the CCPE National Committee on Consulting Practice was engaged in. CCPE seems to have struck out with Manitoba in this inning.

As Council moved on to a few house-keeping chores such as setting dates for future meetings the Chairman was overheard to say something like "wives complicate things". Talking about complicating things Council then proceeded to set Wednesday, October 8th as the day for the regular Monday Council meeting all of which have been held on Thursdays.

Under "Other" business Council discussed the Legislative Committee report which recommended some changes to Clauses 6.5, 6.6 and 6.4 of the Code of Ethics. As it seemed that everyone had a different opinion as to what the clauses meant or did not mean and since the clauses had never been tested it was resolved that the clauses should remain as written.

As for the self interest item the matter

of clauses 6.5 and 6.6 of the Code of Ethics has been on or near the agenda of every Council meeting attended by this reporter in the last year. It cannot be said that Council rushes to conclusions. Time is given for study and discussion, and the membership should be satisfied that important matters are given the necessary time and consideration.

The meeting gratefully adjourned at 8:37 p.m. —R.C.I.

October 8, 1975

After approving minutes Council approved of sending out a letter from the Solicitor, Mr. A. Anhang to the consulting engineers concerning the matter of corporate practice. The letter was to be confidential and this reporter did not see it. It is something like being with a group that has an inside joke that you are not party to. Perhaps I will see it when I get back to my office.

The regular business of accounts, licences, transfers, registrations, etc. passed smoothly. As in the past Council considers these matters important and in keeping with the mandate Council agreed to look for a mentor for one of the recent engineering graduates who is working for the Manitoba Department of Northern Affairs.

A request from OPEEPM for financial assistance in its rocky road to certification was tabled. The Councillors were generally in favour but felt the matter could wait until the final hearings on the exemption list were held. There is some question that financial support of this kind requires a by-law, but since Council has previously supported Manitoba Hydro engineers without one they felt they could do so again.

Council agreed that it should proceed as an administrative tribunal to hear a complaint against a member and that the member be advised accordingly. Suitable dates for the first hearings were to be established as quickly as possible.

The matter of recording the hearings was the subject of some debate as it is expensive to hire a court reporter. It was left to Mr. Algeo to get the most economical means of recording the hearings.

Mr. R. Shemie and Mr. F. Jost appeared as a delegation from the Salary Schedule Committee to explain their findings and their reason for the recommended across the board increase of 12% to the starting salary and fully satisfactory lines on the recommended salary schedule issued in

1975. The background report will be available at the Association office.

Council concurred with the recommendation and moved that the revised curves be issued immediately and that the subject be on the agenda of the Annual General Meeting.

The Chairman reported on the Annual General Meeting arrangements.

The reporter quietly left the meeting at 7:45 while a discussion about slating the discussion on the Salary Schedule for an evening meeting so that more salaried engineers could attend was going on. Apparently the Chairman agreed to take the suggestion under advisement.

The major item of interest would have been the discussion on enforcement of the act with regard to those practising but not registered. The minutes are sparse but it seems that Council will ask the solicitor to give his opinion on specific examples with variations so that the opinions of the solicitor on a variety of situations could be obtained. These opinions should be of interest as this problem of people calling themselves engineers while not being eligible for registrations is a common one. The power engineer is an example.

Council named Mr. Grimes as CCPE delegate with Mr. Algeo and Mr. Bouskill as observers. As well, Council declined an invitation to the Newfoundland Association Annual meeting, tabled the Public Relations Committee recommendations, set November 4th as the next meeting and heard reports from Mr. Sochaski on the B.C. Annual meeting and Mr. Bouskill on the E.I.C. Prairie Region Council meeting.

The Council also suggested agenda items for the October 15th meeting with Dean Wedepohl as follows:

1. teaching of engineering subjects
2. the possibility of a change in engineering education which might involve attendance at a community college as a prerequisite.
3. the possible requirement for Engineering Graduates to be articulated for two or three years to accredited firms.

According to the minutes the meeting adjourned at 10:00 p.m. —R.C.I.

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We regret to record the death of R. A. Cunningham, P. Eng.

LIAISON WITH THE UNIVERSITY

A very pleasant and profitable evening was spent on October 15 when members of the APEM council and of the staff of the Engineering Faculty got together for a group discussion and refreshments. Dean M. Wedepohl was host and chairman. All twenty-six members attending stayed the full course of five hours.

Discussion opened on the subject of the teaching of engineering as a practice of engineering. This subject has been frequently written up in the Bulletin and has in the past occupied the attention of Council for many hours. Dean Wedepohl confirmed that by next March the faculty will be almost 100% APEM members. This indication of solidarity of purpose got the meeting off on a good footing.

George De Pauw recommended changes in engineering education, with the possibility of a two year course in technology being a pre-requisite. This suggestion did not meet with full approval but engendered lively discussion, ending with general agreement that the Community Colleges and the University should work more closely in accreditation of courses. George De Pauw recommended that more large models be built by students that we may free ourselves from "the disease of over-design". Another quote from George: "Too often if you are making enough money you are considered professional."

Ray Sochaski spoke on the need of graduate engineers to be articulated.

Professor Shewchuk presented an outline of a new course on Mechanical Engineering Design involving participation by engineers and other professionals in "the real world" as well as from the University staff, a course in professionalism.

Dean Wedepohl outlined some of the factors facing the University in its present crisis and how the current economic flux was affecting performance. A Master of Engineering degree programme is before Senate for approval. "Society is dependent on engineers and will be more so in the years to come".

Dick Johnson covered the experience of outside monitors in last year's review of the Electrical Engineering summer report and invited participation by APEM members again in the coming year.

Finally, Ted Speers outlined the community need for a Chemical Engineering department at Manitoba. It was felt that a good dollar or economic balance could be made to show that the economy would be-

nefit from such teaching. Hydro and Nuclear power were available, but we will need a mobile power source to replace gas and oil. Hydrolysis or enzymatic conversion of cellulosic materials can give the basic building blocks toward this end. Dean Wedepohl agreed that such a faculty was desirable, but for now it was necessary to consolidate and improve what was now established.

Altogether a very enjoyable evening.



APEM EXECUTIVE MAKES IMPORTANT POINTS IN PINAWA

By N. L. ARRISON, P.Eng.

The APEM executive listed below attended a local meeting in Pinawa on Wednesday, September 17, 1975. The following important points were made after an enjoyable meal.

- 1) Doug Grimes pointed out that Federal and Provincial Governments have asked all Crown Corporations to buy from Canadian suppliers and give Engineering work to Canadian companies in preference to foreign operations. If anyone knows of situations where this is not the case, they are asked to point it out to the Managing Director, Terry Algeo, who will inform the government of the policy violation. The Engineer informing the Managing Director of the policy violation will not have his name made public.
- 2) Charles Bouskill discussed the procedure under which erring Professional Engineers or those illegally doing engineering work are now prosecuted. First of all the ethics committee counts on engineers to point out illegal engineering or unethical engineering practises. Once the Committee has been informed of what is happening, it investigates the situation to obtain evidence. Keeping the name of the engineer who informed it anonymous, it gathers all evidence necessary to present the case to the Council. The Council, who knows nothing about the matter to this point, sit as a jury and decide, on the evidence, whether the Association should prosecute. Charles said "If we feel the Association isn't policing ethics enough, it is up to us, the members, to turn guilty offenders in to the Ethics Committee." Hence, if you want to see the Engineering Act enforced, help your Ethics Committee.

- 3) Members of the Salary Schedule Committee stated that active participation by A.P.E.M. members is helping the Association. The results have shown up in better salary surveys that state not only what engineers are presently getting but what they should get based on relative scales to other professions in society etc. The results have also shown up in better suggestions for portable pension plans and more accurate information in surveys because so many are participating.
- 4) Doug Grimes wanted to know if A.P.E.M. members favored higher standards for engineering students at the University of Manitoba. A vote at the meeting was taken. Of the 33 members present, 19 favored higher standards and 8 felt they were presently good enough.

Executive members present at the Pinawa A.P.E.M. meeting were:

Doug Grimes, Charles Bouskill, George De Pauw, Terry Algeo, Ray Sochaski, Ted Glass, Walter Saltzberg, Allan Moffatt.

Eight A.P.E.M. members from Pine Falls and 25 from Pinawa also attended the meeting. The local Pinawa meeting was suggested by Ray Sochaski and organized by Norm Arrison.



PROTECTION AGAINST KIDNAPPING

As members of an honorable profession, loaded with money, we must recognize that we or our dear ones, especially our secretary, are liable to be kidnapped and held for a ransom. The purpose of this article is to advise you what to do so that you will be prepared when your time comes.

1) If it is the secretary who is kidnapped, pay up but don't tell your wife.

2) If your wife is kidnapped and the villain phones you demanding money say, "You must be kidding. I wouldn't pay a nickel for her". There are certain risks in saying this but if she isn't listening to the conversation, you may get away with it.

3) If it is you who is kidnapped, it is well to have a contingency plan prepared ahead of time.

a) The first thing to do is panic. This will show the kidnapper that you are incompetent in an emergency and no one will be willing to pay any money to get you back.

b) It is advisable to speak "Winnipeg French". This should be enough to turn

the stomach of the kidnapper and you may be able to get away while he is indisposed. It may also indicate that you work for the Federal Government and since there are far too many Federal civil servants anyway, no one will pay to get you back.

c) Give your kidnapper your iron ring and assure him that it will be his key to admittance to the Mudsluggers Club, the Beery Philosophy Club and the Engineers' Picket Line.

d) If Plan "c" does not work, offer to take him to the Engineers' Rub Club. It is not necessary to tell him that this club is frequented by civil service mandarins who think they are going to get rubbed but actually they get clubbed by each other while they fight for the next power plum. The kidnapper would not have a chance in this sort of a place and would either be rubbed out or promoted upstairs — the paths of all losers. If it's the latter path that is chosen, he will get far more than the ransom and will thereafter have money and prestige for life.

This advice to engineers was prepared without benefit of the clergy, LIP grants, DREE grants or the Canada Council.



LETTERS

Opinions expressed in Letters to the Editor are not necessarily those held by the Bulletin Committee, the A.P.E.M. or the Council of the A.P.E.M.

Competition

The Editor,
Dear Sir:

I am concerned about the results of the recent survey dealing with the formation of a "self interest organization." The overriding sentiment of the "No" votes was that many members are against unions. They have seen what unions have done to erode their own purchasing power, therefore they are against unions and don't wish to belong to one themselves. I contend that Engineers can use more imaginative means than employee-employer confrontation to obtain a fair and just return for our contribution to society.

First it must be established that salary inequities exist. Take this hypothetical case of two people, six years ago. At the age of 16, both are finishing grade ten. "A" decides to quit school. He takes a job at the post office as a letter carrier. "B" decides to go into engineering. Therefore, he must finish his matriculation and study four years at University. At the present

time, "A" would have worked six years and earned about \$50,000. "B" would be coming out of school. Working summers, he may have earned a total of \$8,000. He will have about \$3,000 in student loans. He is fortunate to gain employment at \$12,000 per year. "A" will be earning \$13,000 at this time. It appears that "B" has made a tremendous error. His only consolation is that he knows something, although it is something he cannot sell at a fair return. I believe that this and similar situations can and do occur and that the inequities are apparent. Also, the contribution of the engineer to the works of society is probably an order of magnitude greater than that of the letter carrier.

An acceptable solution to this problem is as follows: Do as other professions do. Set minimum salary levels based on years of experience, set fee schedules, and limit the supply of graduating engineers. Doctors have done this for forty years. In those years they have maintained a high level of professionalism and individual freedom within the framework of a sellers' market, without (until recently) reverting to an employer-employee confrontation.

There is no need for engineers to price-competes. Who competes these days anyway? Labour organizations do not have individual members competing with one another. Lawyers don't price-competes. The amount of competition in the market place is decreasing continually. Basic food stuffs are marketed by boards which set prices and set production quotas. Oil companies are not in price competition.

Sure, it would be preferable that there be a return to competition, but then only in all sectors.

It would be easier for us to set salary levels and limit the supply than to attempt to erode the organizations and cartels. The first step would be to establish the "self interest organization" and use the recommendations of the Stevenson-Kellogg survey to establish minimum salary levels. "No engineer shall work for less than the amount recommended by the Stevenson-Kellogg report." Then the SIO can establish means for limiting the supply of engineers. There are several ways in which this can be done, but it must be done all across Canada. The main thing would be to increase University entrance requirements and increase graduation requirements.

There was a comment that the interests of the employer engineer are diametrically opposed to the interests of the employee engineers. The only reason this is so is that employer engineers are in competition with

one another, thereby tempering their return on a specific project. If the price competition is eliminated, competition on the basis of expertise will still exist, and everyone benefits. The employers, the employees, the profession, the public.

If the engineer is finally given a fair return for his work, he can surely reconcile participation in continuing education (such as up-grading and graduate studies). This would be very desirable in attaining a higher standard of professionalism.

If something isn't done to eliminate this price competition between ourselves, we will soon be competing on a new level. We'll all be competing for the balogna on the grocers' shelves.

Yours truly,
ALBRECHT LOHSE, P. Eng.

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Imperial and Metric Gardening

The Editor,

Dear Mr. Speers:

I assume that the initials "E.A.S." appearing under the item "Growing Potatoes in the Library" (page 7 of The Manitoba Professional Engineer, August, 1975) are yours. The article is of considerable interest from a horticultural viewpoint; but the dimensions scattered throughout are also of interest, from another viewpoint. First, there is an odd mixture of Imperial and metric (SI) units. The frame is given as 3' x 8', while the cucumbers are said to have grown to a length of over "40 cms, weighing 500 grams". Later, it is reported that the potatoes "grew to a height of 40"; and that the "tomatoes turned red on the vine, weighing on an average 260 gms".

Speaking as one engineer to another, I would wonder why Imperial measurements were used in some instances and SI in others. The frame could have been designated as 0.92 m x 2.4 m, where "m" stands for "metre (s)". While there is nothing wrong with a cucumber being 40 cm long (in fact, this is a remarkable size for a cucumber.), good usage requires that centimetre *or* centimetres both be abbreviated as "cm" (no plural form). The same is true for gram or grams: the abbreviation is always "g".

May I congratulate you on your achievements as a library-gardener and hope you will take no offense at the corrections in usage of abbreviations of SI units?

Yours very truly,
P. SHANE, P. Eng.

Safety

The Editor,
Dear Sir:

I have no "irresistible urge" to write letters as my friends undoubtedly will attest but I feel compelled to correct a most unfortunate misconception regarding the intent of a recent communication from the Workers Compensation Board to the A.P.E.M. It is my belief that the professionalism of engineers was never questioned but perhaps naively accepted as fact. Rather the intent was to publicize as widely as possible the concern of The Workers Compensation Board about safety certainly, but most especially with health hazards in industry. The author of a subsequent article in the "Bulletin" proposed that no responsible professional engineer would allow an unsafe design to be built. However in my own opinion this statement does not go far enough in one respect and needs further elaboration in another. I would suggest that no responsible professional engineer would KNOWINGLY allow an unsafe design to be built. This slight change might appear to be obvious but from it flows an equally important concept. That is, a true professional should try to keep abreast of major developments not only in Manitoba but elsewhere too in his or her areas of practice.

"Safety" traditionally has been synonymous with the prevention of physical injury such as anatomical dismemberment and "safe" design mechanisms are well established in principle at least. However recent safety legislation in, for example, the U.S.A. (Occupational Safety and Health Act, 1970) and the U.K. (The Health and Safety Act, 1974) has introduced health aspects too. (Incidentally to describe the prospect of regulations in Manitoba akin to such legislation as not constituting a "story" is nothing less than incredible in view of the profound impact of the U.S. law especially on industry generally and the engineering profession particularly.) Health like physical hazards often can be alleviated with the proper design of equipment so that engineers still have a most important role. Unfortunately they mostly will be operating in a vacuum because their training often has precluded these most recent considerations. It is to be hoped that once informed, educational institutions, individual engineers and, not least, professional associations like the A.P.E.M. will meet the challenge to fill the vacuum.

Yours very truly,

N. POPPLEWELL, P. Eng.



W. R. McQUADE, P. Eng.

Congratulations to W. R. (Ray) McQuade who has been named Chairman of the Board of Governors of the University of Manitoba. Ray is a former Editor of this publication.

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CONSULTING ENGINEERS

Council has requested that the following correspondence be published in the Bulletin for the information of members.

July 14, 1975

The Executive Council
Manitoba Government
Room 216
Legislative Bldg.
Broadway & Memorial Blvd.
Winnipeg, Manitoba

Dear Sirs:

It has come to the attention of this Association that the existing capabilities of Canadian Engineers and the development of new Canadian Engineering Technology are sometimes overlooked when in fact, the required engineering expertise is available in Manitoba or in other Canadian provinces. Much of this expertise is available locally from Consulting Engineering firms but also from Engineers practising their profession within the government, industry and the educational field.

The subject of the Utilization of Cana-

dian Engineering Capability has been under study by a committee of the Canadian Council of Professional Engineers, the National Engineering body. We have enclosed a policy statement on this subject prepared by the C.C.P.E. Committee and endorsed by the National body and by our own Manitoba Association.

We request that our government consider and implement where possible, the enclosed recommendations. We are convinced that such a policy will have a beneficial effect on the economy as a whole.

Yours very truly,

ASSOCIATION OF
PROFESSIONAL ENGINEERS
OF THE PROVINCE OF MANITOBA

Per:
T. W. Algeo, P. Eng.
Managing Director & Registrar

**C.C.P.E. STATEMENT OF POLICY
ON THE UTILIZATION OF
CANADIAN ENGINEERING
SERVICES**

1—GENERAL STATEMENT

The engineering profession in Canada today is 80,000 strong, includes experienced specialists in all branches and sub-branches of engineering, and has the technical capability and expertise required for practically all engineering projects undertaken in the country.

In exceptional cases involving technology not available in Canada, foreign expertise may be required for certain aspects of projects but this in no way justifies the employment of foreign firms for the entire project.

The number of engineers engaged in consulting engineering work in Canada is in excess of 8,000 with at least twice as many technical and other supporting staff, and Canadian consulting engineering firms are engaged in a wide variety of projects, both in Canada and abroad. A further 70,000 or more engineers are employed in career positions with a wide variety of private companies, crown corporations, research establishments, government agencies and universities, etc. . . . All parts of the country have extensive professional capabilities and technical skills at their disposal with on-site background, knowledge of local conditions, supply sources and procedural awareness that can, and do, provide economies of operation and environmental acceptability.

The standards of education and training of Canadian engineers are very high and at least equal to those of other highly developed countries.

It is a well-known fact that engineers will specify materials and equipment with which they are most familiar and consequently using Canadian engineers on Canadian projects has a very substantial impact on the whole economy of the country.

The continued development of a strong, competent and versatile Canadian engineering capability is essential to the growth and prosperity of Canada and must be encouraged by all possible means.

It is therefore sound judgment and good economics that governments at all levels actively promote the maximum utilization of Canadian engineers and Canadian engineering skills on all enterprises within their jurisdiction and use their influence to persuade the private sector to adopt and implement such a policy as being in the best interest of the country.

**2—DETAILED RECOMMENDED
POLICY**

- 2.1 In all cases where government grants or other assistance are involved, governments should make it an essential condition of the grants or other assistance that a high percentage of Canadian engineering skills and Canadian engineers be utilized and should rigidly enforce such requirements.
- 2.2 Where projects over which governments have jurisdiction directly or indirectly require the development of new technology, Canadian engineers and scientists must be used to the largest possible extent in the development of such technology.
- 2.3 Where projects over which governments have jurisdiction directly or indirectly require existing expertise not available in Canada, such expertise should be secured through Canadian engineers who should be given the responsibility for the entire project.
- 2.4 Governments should co-operate together in planning and commissioning similar projects to allow for the development of a distinctly

Canadian technology, Canadian equipment, Canadian machinery, etc. . . which could not be developed without the economy of scale generated by the combination of several similar projects.

- 2.5 Governments should avoid establishing artificial barriers which may prevent or discourage joint ventures designed to develop or use new technology.
- 2.6 Governments should recognize the need for development of engineering expertise and capability in all regions of the country and recognize the need, particularly in the less developed regions of Canada, to promote the preferential use and development of local engineering capability and expertise within their jurisdictions.

Association of Professional Engineers
of the Province of Manitoba
710 - 177 Lombard Avenue
Winnipeg, Manitoba
R3B 0W9

ATTENTION: T. W. ALCEO, P. Eng.
Managing Director & Registrar

Dear Sir:

Premier Schreyer has asked me to acknowledge and thank you for your letter dated July 14, 1975.

My reply to your specific requests must be based on the activities of the Department of Public Works. I can assure you that within the department we make every effort to engage local engineering firms for specific engineering projects. I must point out, however, that many of our construction programmes require architectural expertise. Here again our policy is to engage local architectural firms. These firms may have their own engineering departments; but where this is not the case it is usual for them to engage local engineers.

While it is our intention to continue to engage local engineering and architectural firms there may be situations where consultants from other parts of Canada or other countries may be required. In situations where the engaging of such consultants relates to the construction of some engineering or architectural structure, I concur with your Association that they should work through local firms but I must *insist* that we should have the right to select such consultants rather than leave this prerogative to the local firm.

There are other situations where the selection of outside consultants may be sole prerogative of the government. In those cases where an engineering consultant may have to be called in to investigate an existing situation, prepare a report, and perhaps be an expert witness, I can see no purpose in requiring a consultant to function through a local firm which would be given responsibility for the entire work. These cases are perhaps rare and certainly do not account for the major portion of engineering commissions required by government. I do not believe such cases substantially alter the intent of the government to use local engineers and architects wherever possible.

I trust that the situations referred to in your letter are practices that occur in provinces other than Manitoba. If there are specific instances where your Association feels that we have been amiss in the selection of local engineers, I would appreciate being advised.

Please be assured that it is our continuing intent to use local engineering and architectural consultants wherever it is reasonably possible to do so.

Sincerely yours,

Russell J. Doern
Minister

c. The Honourable E. Schreyer
Premier

♦ ♦ ♦

OPPORTUNITY KNOCKS AGAIN FOR ELECTRICALS

The Department of Electrical Engineering is again inviting participation by engineers outside the faculty in the evaluation of theses of fourth year electrical students. Each electrical student is required to give an oral presentation of his thesis on "Thesis Day." All that is required of outside evaluators is participation on thesis day and some homework. There are no other obligations and no boring meetings to attend. Thesis day is planned for mid-March, 1976.

Each student's thesis is evaluated by three engineers. First is the student's advisor, a faculty member who has guided the student's thesis work through the year. The second engineer studies the thesis before thesis day, the third engineer hears the thesis for the first time in the oral presentation. All three engineers plus other members of the audience question the student and the three assigned engineers allo-

cate a mark on the student's performance.

Volunteers are required for the positions of second and third engineer.

Last year the program was successful, enjoyable, and interesting. Those who participated will receive personal invitations to come again.

For the current academic year, it is hoped to have an oversupply of volunteers so that theses and examiners may be well matched. If you are interested in this project, please write a note mentioning your name, address, telephone number, and area of interest to Professor R. A. Johnson, Dept. of Electrical Engineering, University of Manitoba, Winnipeg, Man. All the best engineers will be there. —J.W.J.L.

★ ★ ★

THE UNIVERSITY

We should be alert as to what is happening at our University and to the intentions of the Provincial Government relative to the difficulties being encountered. The subjugation of a university is not something that can be done with the expectation that it will bounce back again. Once the university as a site of freedom of development is destroyed, that will be the end of it.

We should be aware of the government's intentions as recommended by the Task Force set up to study this area.

The REPORT issued by the Manitoba Task Force on Post-Secondary Education is a comprehensive and well-documented review of existing conditions. There is no denying that. But comprehensiveness and good documentation cannot mask the fact that some of the assumptions operative in the REPORT are questionable and that many of the recommendations of the Task Force seem designed to consolidate government control in an area which should be fiercely independent of governmental and political control.

The Task Force has identified a number of objectives which it argues ought to be the collective keystone of higher education in the Province. It argues that post-secondary education should not be seen as a terminal experience, but should be considered as a desirable, life-long aspect of human development. In addition, the Task Force contends that in spite of large increases in student aid (From \$985,000 to \$5.5 million in five years), equality of educational opportunity does not exist in Manitoba, largely as a result of geographic iso-

lation and social and economic conditions. And such equality, the Task Force insists, is needed. Moreover, the Task Force insists that greater openness and a significantly higher degree of public accountability among provincial institutions of higher learning must be sought in the future.

These objectives are based on an assumption that, until recently, few would have dreamed of doubting; specifically, that one of the main causes of inequality in modern society is equality of education in terms of both the availability of resources and the accessibility to those resources. The obvious corollary to such an assumption is that education can thus be used as a tool to lessen societal inequities. But social scientists have been looking more closely at this assumption recently (see Godfrey Hodgson's "Do Schools Make a Difference?" in the *Atlantic Monthly*, June '73) and its validity has been challenged. James S. Coleman, for example, studied 600,000 children attending around 4,000 schools and found that education per se is not necessarily a compensatory device. Indeed, students who began with serious educational deficiencies often ended their schooling with even more serious deficiencies. In 1972, Daniel Moynihan suggested that educational spending conforms to the law of diminishing returns, that frequently larger expenditures will result not in a higher quality in education, but rather in a lower one. It may be that as far as economic and social betterment are concerned, educational opportunities are less important than other factors. Coleman suggested that family background may have a greater effect on achievement than the mere availability of superior facilities. Much controversy surrounds this issue — it has yet to be resolved — but what is clear is that we can no longer accept blindly the assumption that education by its very nature will ameliorate societal conditions. Yet this is precisely what the Task Force asks us to accept.

The Task Force finds it unacceptable that while 80% of the cost of higher education is borne by the people, they are, for the most part, excluded from the decision-making process. And the Task Force suggests wider government control as a means to achieve more significant public participation in university and college policy-making. But the fact remains that the people of Manitoba have a more direct way of voicing approval/disapproval already in their hands. Universities and colleges are by nature tied to enrollment figures. Grants are increased as the number of students grows. And courses at all three universi-

ties are offered only if sufficient numbers of students register for them. Courses which do not attract enough students are dropped from the year's offerings. Thus, the people have a very direct voice in the educational decision-making which takes place. To a large degree the institutions of higher learning depend on their approval for their very existence. The advantage of such participation over government control is obvious: it allows the institutions a fair degree of necessary autonomy while still remaining responsive to the desires of the public, yet it precludes the possibility of overt-/covert political manipulation of those institutions.

In its general reorganization of post-secondary education in Manitoba, the Task Force proposes the establishment of a Commission on Post-Secondary Education with three basic divisions — universities, colleges, and regional affairs — paralleling the tripartite division, of higher education in the province. The Commission would have considerably more power and authority than the University Grants Commission in that it would be an active rather than a reactive body. The Grants Commission itself was set up as a control mechanism to regulate funds available to universities without unnecessary governmental interference. This "buffer body" has acted in a manner that I believe has been satisfactory to all concerned. The change recommended by the Task Force surely smacks of change for the sake of change, with one twist. The present Grants Commission operates with a staff of 14. The proposed Commission, assuming a similar proportion of support staff, will require at least 100 employees. Is such bureaucratic proliferation really necessary? Indeed, would it not be possible to utilize, perhaps with some modifications, existing structures for the development of regional and local post-secondary educational centres?

In the area of university research, the Task Force recommends that government include a 45% overhead allowance for all research grants to provincial universities, and then suggests that the Manitoba Research Council "oversee the allocation of research grants and contracts over \$15,000, made by other government departments and agencies." Surely this compounds an already existent error. The Manitoba Research Council has already been placed under the aegis of the Department of Industry and Commerce, and now that the Council's autonomy has been destroyed the Task Force would also eliminate autonomy in university research as well.

The Task Force has emphasized again

and again its desire that "the colleges, the universities, and the new regional bodies be insulated from direct political influence or control . . ." Yet the monitoring of university research by an agency under the direct control of government hardly insures — it doesn't even encourage — autonomous action. The suggestion that a central admission service be created is equally sinister because it establishes a potential barrier between the individual and the institution to which he/she wishes to apply. The Task Force refers to the service as a "convenient central depot," but as we should all be aware, agencies which screen have a great deal more power than that simple verb implies.

It seems then that what the Task Force has really accomplished is something less, and paradoxically, something more, than it set out to do. Beginning with some rather questionable assumptions it has concluded by recommending a set of structures which undermine the freedom and autonomy of the university, which establish a bloated but largely unnecessary bureaucracy, and which increase the possibility of political control of education rather than diminish it.

—E.A.S.

★ ★ ★

"Too many scientists have blinders over their eyes and can see only straight ahead. What excellent diggers! But where are the smiths, who must refine and hammer, create alloys, fashion a meaningful whole . . . Hence, the mountains of mined ore accumulate around the mouths of the mines, but nothing is done with most of it."

Bentley Glass, "The Timely and the Timeless"

★ ★ ★

MOVING?

PLEASE let us have your change of address

FORMER PRESIDENTS OF THE ASSOCIATION

NOTES

1920—M. A. Lyons 1947—B. A. Johnston
 1921—M. A. Lyons 1948—B. A. Johnston
 1922—D. A. Ross 1949—T. E. Storey
 1923—A. A. Young 1950—W. D. Hurst
 1924—A. J. Taunton 1951—W. D. Hurst
 1925—C. H. Fox 1952—C. L. Fisher
 1926—D. L. McLean 1953—J. L. Charles
 1927—Wm. Aldridge 1954—G. B. Williams
 1928—W. G. Chace 1955—J. Hoogstraten
 1929—C. H. Attwood 1956—J. Hoogstraten
 1930—C. H. Attwood 1957—N. S. Bubbis
 1931—R.W.McKinnon 1958—L. A. Bateman
 1932—J. W. Sanger 1959—W. L. Wardrop
 1933—J. W. Sanger 1960—W. L. Wardrop
 1934—H. M. White 1961—C. S. Landon
 1935—J. N. Finlayson 1962—R. E. Chant
 1936—A. L. Cavanagh 1963—T. E. Weber
 1937—E. V. Caton 1964—B. Chappell
 1938—P.Burke-Gaffney 1965—S. J. Borgford
 1939—W. Youngman 1966—R. T. Harland
 1940—F. S. Adamson 1967—R.C.Sommerville
 1941—G. E. Cole 1968—F. M. Fowler
 1942—C.V.Antenbring 1969—L. W. Blackman
 1943—H.S.Rimmington 1970—J. D. Adam
 1944—H.S.Rimmington 1971—R. Hood
 1945—G. E. Cole 1972—S. Barkwell
 1946—J. W. Battershill 1973—C. R. McBain
 1974—G. A. De Pauw



USE OF SEAL

Section 18 of The Engineering Profession Act reads as follows:

Every person registered under this Act shall have a seal, the impression of which shall contain the name of the engineer and the words "Registered Engineer, Province of Manitoba," with which all estimates, specifications, reports, working drawings, plans and other documents issued from his hand shall be sealed.

FIFTY-SIXTH ANNUAL GENERAL MEETING

Friday, November 28th, 1975

FORT GARRY HOTEL

PROGRAMME

10:30 a.m. Registration

11:00 a.m. Official Opening by President

Announcement of Winner of Early Bird Draws

Annual Meeting Convenes

Introduction of Head Table

Minutes of Annual Meeting of November 30, 1974

Minutes of Special Meeting of March 3, 1975

Declaration of Councillors Elected

Reports

Auditors' Report and Appointment of Auditors

Draft Budget

Nominating Committee Appointments

12:00 Reception

12:30 p.m. Luncheon

Introduction of Head Table

Presentation of Awards

Greetings from E. C. Garland, P. Eng., President C.C.P.E.

2:00 p.m. Annual Meeting Continues

(1) Declaration of Officers Elected

(2) Organized Salaried Engineers Groups — Reports

(3) Salary Recommendations

6:00 p.m. to 1:00 a.m. Reception, Dinner, Dance

Bring this Programme to the Meeting