



MINUTES

ANNUAL GENERAL MEETING 2014

26 June 2014, 10:15 – 11:15 a.m. NDT

Fort William Salon C & D, Sheraton Hotel Newfoundland

115 Cavendish Square, St. John's, NL

FELLOWS IN ATTENDANCE

Paul Acchione *

Paul Amyotte

Douglas Barber

Yves Beauchamp

James Beckett *

Xiaotao Bi *

Clement Bowman

Douglas Buchanan *

Darrel Danyluk

Edward Davison

Kevin Englehart *

Clement Fortin *

Robert Frederking

Ray Gosine *

Baining Guo *

Nancy Hill *

Chris Huskilon *

Ian Jordaan

Janusz Kozinski *

Sridhar Krishnan *

Pierre Lafleur *

Claude Laguë *

Richard Marceau

Peter Mascher

Edward McBean *

John McLaughlin

Peter Noble *

Dennis Paddock

Ding-Yu Peng *

Michel Perrier

Ross Peters *

Walter Petryschuk

Eugene Polistuk

Ken Putt

Shen-En Qian *

Doug Ruth

Amir Shalaby

Sara Jane Snook

Lawrence Staples

Pierre Tremblay

Chris Twigge-Molecey

(* = New Member)

1. OPENING REMARKS

Executive Director Kevin Goheen opened the meeting at 10:23 a.m. He invited Fellows to visit the CAE office when in Ottawa. Dr. Goheen reported on the development of a new CAE website and CAE's social media presence (LinkedIn, Facebook and Twitter). He then introduced the CAE president.

President Richard Marceau extended a warm welcome to all members, old and new, to St. John's and the 28th Annual General Meeting of the Canadian Academy of Engineering. He introduced the head table participants – Kevin Goheen (Executive Director), Doug Ruth (Board member and President-Elect candidate) and Yves Beauchamp (Board member and Treasurer candidate). It was noted that Past President Kim Sturgess, President-Elect Pierre Lortie and Secretary/Treasurer John Leggat were unable to attend.

President Marceau noted that since 1987 the Academy has grown from its 44 founding members to some 406 Active Fellows and 163 Emeritus Fellows, and three Honorary Fellows, for a total on 572 at this time, not including the 49 Fellows and two Honorary Fellows being inducted later today. He noted that our Fellows clearly include many of the country's most accomplished engineers, and he saluted their dedication to the engineering profession.

2. RECOGNITION OF DECEASED FELLOWS

President Marceau asked the assembly to stand for a few moments while he recognized Fellows who we are aware of who have passed away since our last AGM:

George C. Baker, elected in 1989, passed away on November 10, 2013.

Pierre Franche, elected in 1998, passed away on March 13, 2014.

Francis T. Hartman, elected in 2003, passed away on March 15, 2014.

Gerald G. Hatch, elected in 1989, passed away on June 9, 2014.

Harry Hole, elected in 1997, passed away on July 3, 2013.

Leslie G. Jaeger, elected in 1998, passed away on August 20, 2013.

Earle J. Klohn, elected in 1993, passed away on July 22, 2013.

Philip A. Lapp, elected in 1987, passed away on September 25, 2013.

Jacques Lyrette, elected in 1997, passed away on November 18, 2013.

Benjamin B. Torchinsky, elected in 1998, passed away on December 23, 2013.

3. QUORUM DETERMINATION

President Marceau noted that our By-Laws require a minimum of 20 members or 20% of the active membership (whichever is less) to constitute a quorum. He observed that there were clearly more than 20 Active Fellows present, and hence declared a quorum. He reminded attendees that while Emeritus and Honorary Fellows are welcome to participate fully in the discussion and to address the meeting, they are **NOT** eligible to cast a formal vote, or to propose or second motions, except for the special resolution (item 8). He requested participants to identify themselves, when making motions or addressing the meeting, to ensure that we have an accurate record of the meeting.

4. APPROVAL OF AGENDA

President Marceau invited any additions or modifications to the agenda distributed. There being none, it was moved by W. Petryschuk, seconded by A. Shalaby, that the Agenda be approved. **CARRIED.**

5. APPROVAL OF MINUTES – AGM 2013

It was noted that the minutes from the previous Annual General Meeting in Montreal on June 21, 2013 had been available on the CAE website for an extended period of time, and were also included in the material distributed for this meeting. The President invited identification of any errors or omissions by those in attendance.

It was moved by John McLaughlin, seconded by S. J. Snook, that the minutes for the 2013 AGM be approved as amended. **CARRIED.**

6. REPORT OF PRESIDENT – 2012/2014

President Marceau read his report set out below which had been distributed to the members present:

I have had the privilege of serving the Canadian Academy of Engineering as President for two years now. During this time, we have introduced significant improvements to its structures and processes, and accelerated its policy-influencing activities. Examples of our accomplishments include initiating the creation of local sections of the Academy, thereby extending its footprint across Canada; partnering more closely than ever with its sister Academies, especially within the Council of Canadian Academies; doubling the number of its task forces; leading the successful restructuring of the Trottier Energy Futures Project research partnership which is on track to provide remarkable findings by the end of this year; launching a book on energy which deserved a six-page supplement in the Globe and Mail only a month ago; greatly intensifying its internal communications and public outreach; and renewing and strengthening its internal governance and management. In my remarks here today, I will share the details of what we have accomplished, and some of the challenges that lie ahead. Even so, we can be very proud of the road we have journeyed together...

Local Sections of the Academy

In June of 2012, I announced that a priority of my mandate would be to stimulate the development of local Sections of the Academy, with the goal of intensifying the engagement of our Fellows. This simply follows the long-held belief of thinking globally, and acting locally. In March of 2013, we formally announced the creation of the Montreal Section. Currently, we are very close to announcing the creation of a section in Calgary. Elsewhere, progress continues, slowly but surely. Of course, with only 620 Fellows distributed across our immense country, assembling the critical mass of Fellows needed to create a section isn't always easy. We must proceed carefully, create sections where it makes sense, and support those Fellows who wish to be more active in the manner that is the most appropriate, wherever they may be.

Council of Canadian Academies

We have also made slow progress on the thorny issue of financial support from the Council of Canadian Academies. In October 2013, after much debate and soul-searching, the three founding Academies supported the Council's request for the renewal of its federal funding, following a Council Board resolution announcing its willingness to explore greater financial support for the Academies. Unfortunately, progress essentially ground to a halt until April of

this year when I took the initiative of leading the preparation of a letter to the Chair of the Council, Dr. Margaret Bloodworth, signed by all three Academies, requesting more timely action. A response was received at the end of May, and discussions have resumed.

In the meantime, various Council Board members have been informed of the urgency of addressing the growing dissatisfaction of the Academies on this front. I have often pointed out that, if I were a Board member of the Council of Canadian Academies, I would be deeply concerned with the increasing sense of disenfranchisement felt by its three founding Academies. In other words, as a Council Board member, would I not be thinking that it just might be a question of survival? Please don't misunderstand the Academy's position: we recognize the important work done by the Council of Canadian Academies, we continue to be fully supportive, and we are focused on a fruitful long-term relationship. However, it is also time for the Council to recognize that it must evolve. In the meantime, the Federal Government has deferred its decision to renew funding for one year. The need for greater harmony between the Council and its founding Academies cannot have been helpful in its bid for renewed funding.

Trottier Energy Futures Project

Another important initiative that I have shepherded during my time as President has been the Trottier Energy Futures Project, a project initiated over four years ago by Academy Fellow Lorne Trottier in partnership with the David Suzuki Foundation. The purpose of this study is to determine how Canada could reduce its carbon emissions by 80% of 1990 levels, and do so by the year 2050. A year ago, despite the publication of a few reports, the Academy identified the need for better project management and a stronger technical support structure. As a result, I strongly advocated for a different approach which was finally approved by the Project Board in December, 2013. I am very pleased to say that the project is now on track for arriving at a fully successful outcome by December of this year.

We are presently exploring an extension of the partnership in 2015 for the purpose of rapidly bringing the project's findings to the attention of government, industry, and eventually Canadians of all walks of life. We are anxious to leverage the project and its findings for enhancing public awareness of the Academy, both nationally and internationally.

I especially wish to acknowledge the vision and courage of our colleague and Fellow, Lorne Trottier, for initiating this ambitious project, including the Academy in his plans, and staying with it through many highs and lows over the years!

Public Engagement

This leads us to the topic of the Academy's public outreach activities. Over the past two years, the Academy has been quite active in organizing or participating in national fora, including conferences, presentations, appearances before government committees, and publications.

In May, 2013, a highly successful conference was held in Sarnia entitled "Bitumen – Adding Value: Canada's National Opportunity." This conference was organized as a direct result of our Energy Pathways Task Force's successful June 2012 publication entitled "Canada: Winning as a Sustainable Energy Superpower." Shortly thereafter, our June 2013 Symposium, under the

leadership of this year's new president, Pierre Lortie, successfully addressed the important and timely topic of Canada's future in manufacturing.

I have also been invited to present the Academy's views on energy on many different occasions. These have included the Canadian District Energy Association's Annual Meeting in June 2012, the Toronto Forum for Global Cities in October 2012, the University of New Brunswick's Deneen/Andrews lecture series in February 2013, a meeting of the Professional Engineers of Ontario in March 2013, the Council for Clean and Reliable Electricity's Annual Energy Leaders Roundtable in April 2013, and the 2013 Ontario Power Conference, also in April 2013. In February 2013, I was also invited to speak before the Standing Committee of the House of Commons on Industry, Science and Technology, on "the state of engineering in Canada."

In the second half of 2013, Clem Bowman and I jointly published two "op eds" in the Ottawa Hill Times on controversial topics related to "energy". The Hill Times also published op eds by Academy Fellows Pierre Lortie on advanced manufacturing, Leah Lawrence on the markets for Canadian energy products, and Digvir Jayas on food security. The National Post published an article by Saeed Mirza on infrastructure renewal, and an op ed by Kim Sturges on yet another timely topic, water management.

In January 2014, I provided a response to the Federal Government's position paper entitled "Seizing Canada's Moment: Moving Forward in Science, Technology and Innovation" based on the work that Clem Bowman and I have published on what we call Canada's "Big Project Innovation Strategy." All in all, there is growing evidence that the Academy's voice is being heard, and that our positions may have contributed to the Federal Government's recent announcement of its historic 10-year Infrastructure Plan.

Governance and Communications

In the past year, the Academy has had to comply with new federal laws for not-for-profit corporations. As a result, we have created new Articles of Continuance and revised the existing By-laws to be compliant with the updated Federal Not-For-Profit Corporations Act: these are submitted to you today for your approval. Yesterday, the Board approved a new Executive Term Policy allowing for two-year presidential terms, which will bring our Academy's presidential mandate in line with our two sister academies, where presidents serve for two years rather than one. This will ensure greater continuity and consistency of the Academy's actions over time, and more timely reaction to issues as they arise. This is an initiative which began under John Leggat's tenure as president over five years ago, which we have finally brought to fruition.

The Academy has also significantly upgraded its website, improved its internal communications with its Fellows through LinkedIn, and established an Academy presence on Twitter and Facebook. Under Dr. Peter Frise's leadership, the Academy's Fellowship Committee has continued to recommend up to 50 high-quality candidates for election to Fellowship every year, while achieving better balance among academic, industry and government candidates.

Academy Task Forces

At our Symposium today, you are learning of the progress made by our two active Academy Task Forces, the new Task Force on Engineering in Canada's Northern Oceans, led by Fellows

Ian Jordaan and Ken Croasdale, and the long-standing Energy Pathways Task Force, led by Dr. Clem Bowman and myself.

As this is my last opportunity to speak to you as your President, I will abuse of executive privilege to trump my dear colleague and very good friend, Clem Bowman, and announce that our task force is launching its next book entitled “Canada: Becoming a Sustainable Energy Powerhouse” this very afternoon! This is a follow-up to our book published only two years ago entitled “Canada: Winning as a Sustainable Energy Superpower.” In fact, the book to be officially launched today was showcased in a six-page energy supplement published nationally by the Globe and Mail on May 21st. I could continue on this topic for hours, but Clem will never forgive me, so I’ll stop here! I hope you enjoy the Panel session, and eventually our new book.

The Future

Beyond the many projects described above, the Academy’s greatest priority remains the need to find ways of engaging more Fellows in Academy-related activities. Each and every one of you is an engineer of stature, nationally recognized for his or her importance to the profession and society ... we must do a better job of motivating each and every one of our Fellows to contribute to the Academy in some small, ordinary way ... over time, the result can end up being ... extraordinary ...

I must now take a moment to speak of myself, only because there is something at play that affects my ability to maintain my commitment to the Academy in the immediate future. Three months ago, I was diagnosed with cancer of the blood. I have been undergoing chemotherapy ever since. My immune system is presently compromised, and I am dealing with parts of my bone structure which have also been compromised. That is the bad news. I also have good news: I have been diagnosed early and there is much reason for optimism. Because of this however, in the coming year, I will need to step back from the Academy. If all goes well, I will be able to return to the Board in 2015.

Whatever the outcome, there is no sense in dwelling on anger, sadness and unhappiness. The late Jack Layton said it best: hope is better than fear, love is better than anger, and optimism is better than despair.

So let us hope, love and be optimistic on our way to making our Academy, a better Academy, our country, a better country, and our world, a better world. Our children, grandchildren and great-grandchildren are counting on us ... and engineers can do this better than anyone else.

7. FINANCIAL

- **Audit Report 2013**

In the Secretary-Treasurer’s absence, K. Goheen presented the auditor’s 2013 financial statement for the CAE. The net result for 2013 was an operating excess of revenue over expenses of \$66,773; this was due to careful control of operations expenses and greater than budgeted revenue from the current stage of the Trottier Energy Futures Project and AGM/Symposium Sponsorship. These are different from the internal budget document which

has been presented to the 2013 Annual General Meeting, Board and Executive. There are three primary reasons for this:

1. The auditor groups our journal entries differently. The auditor and we have modified our internal bookkeeping system to change our internal P&L for F2014 to match with them.
2. They bring projects such as Energy Pathways and TEFP directly onto the P&L. We keep track of them separately. This will be reconciled in the 2014 budget.
3. The accounting for the realized and unrealized gains and losses for the investment account is not considered on our internal budget.

It was moved by K. Putt, seconded by L. Staples, that the audited Financial Statements for 2013 be approved. **CARRIED.**

- **Treasurer's Report / Budget 2014**

In the Secretary-Treasurer's absence, Y. Beauchamp presented the CAE's budget for 2014. The meeting folders include the 2014 Budget, which was previously approved by the Board of Directors. It is provided for the information of members. The major differences between the draft 2014 budget and the 2013 budget are a 2% increase in staffing costs, K. Goheen's time on TEFP being allocated from our TEFP overhead (in previous years it came from the non-overhead portion of the grant), a major increase in audit fees, as our auditor had neglected to bill us for 18 months, and \$5,000 for website development. On the revenue side, we are expecting \$76,000 in overhead from the TEFP, materially more than the \$9,000 we have received in each of the first years of the project. The revenue from sponsorship at the AGM is expected to be closer to historical levels, after the record amounts in 2013. At the same time, we expect the spending on the AGM to also be smaller than that which occurred in 2013.

- **Appointment of Auditors 2014**

It was noted that we continue to receive timely service and good value from our auditors, Marcil Lavallée, and the recommendation of the Board is that we reappoint them for the financial year 2014.

It was moved by C. Laguë, seconded by E. Polistuk, that Marcil Lavallée be appointed as CAE auditors for 2014. **CARRIED.**

It was agreed that the CAE will interview new auditors for the 2015 fiscal year, in keeping with best risk management practice of changing auditors periodically.

8. SPECIAL RESOLUTION: ARTICLES OF CONTINUANCE AND BY-LAW CHANGES

K. Goheen noted that the new Canada Not-For-Profit Corporations Act requires organizations such as ours to file Articles of Continuance and updated Bylaws by October 17, 2014. Many of these requirements involve defining the roles, rights and responsibilities of Members. We also used this opportunity to remove many of the practices and policies that had been added to our

Bylaws over the past 28 years, that more correctly should have been Policies under the control of the Board.

K. Goheen noted that the Board of the CAE has worked with outside legal counsel, Merovitz Potechin LLP, to draft the documents to be considered today. We informed Fellows by email in late April that they were available for inspection on the CAE website.

President Marceau introduced the following Special Resolution:

BE IT RESOLVED, AS A SPECIAL RESOLUTION, THAT:

1. The directors of The Canadian Academy of Engineering (the "Corporation") are hereby authorized and directed to make an application under section 297 of the *Canada Not-for-Profit Corporations Act* (the "NFP Act") to the Director appointed under the NFP Act (the "Director") for a Certificate of Continuance of the Corporation;
2. The Articles of Continuance (transition) of the Corporation, which have been submitted to this meeting and are annexed to these minutes as **Schedule A**, are approved;
3. The general operating by-law of the Corporation (as amended) is repealed effective on the date that the Corporation continues under the NFP Act and the new **By-Law No.1** which has been submitted to this meeting and is annexed to these minutes as **Schedule B** is approved and will be effective on the same date; and
4. Any one of the officers or directors of the Corporation is authorized and directed for and on behalf of the Corporation to take all such actions, execute and deliver all such documents, including the forms fixed by the Director, which are necessary or desirable to carry out this resolution.

The Articles of Continuation were accepted and By-laws may be amended by a majority vote of the council, which has been completed, and today we seek a subsequent 2/3 affirmative vote of the voting members at the AGM.

Active Fellows: It was moved by P. Tremblay, seconded by W. Petryschuk, that the special resolution be accepted. **CARRIED WITH 2/3 AFFIRMATIVE VOTE.** Abstention: J. Beckett.

Emeritus Fellows: It was moved by C. Bowman, seconded by R. Marceau, that the special resolution be accepted. **CARRIED WITH 2/3 AFFIRMATIVE VOTE.**

Honorary Fellows: It was moved by C. Bowman, seconded by R. Marceau, that the special resolution be accepted. **CARRIED WITH 2/3 AFFIRMATIVE VOTE.**

9. ELECTION OF DIRECTORS AND OFFICERS – 2014/2015

President Marceau noted that the Nominating Committee had provided a recommended slate of proposals for 2014/2015, and that these had been endorsed by the Board of Directors.

Relative to Officers and Directors-at-Large, the following names had been proposed:

For Officers:

President: Pierre Lortie
President-Elect: Douglas Ruth
Secretary: John Leggat
Treasurer: Yves Beauchamp
Past President: Richard Marceau*

* During the absence of Richard Marceau, John Leggat will assume the duties associated with the position of Past President

For Directors-at-Large:

Continuing: Ian Jordaan
Continuing: Eugene Polistuk
Continuing: Ken Putt
Continuing: Kimberly Woodhouse
New: Eddy Isaacs
New: Sara Jane Snook
New: Colin E. Smith

There being no alternative nominations from the floor, it was moved by L. Staples, seconded by M. Perrier, that this slate of officers and directors be approved. **CARRIED.**

Relative to membership of the Fellowship Committee the following proposal had been received:

For Fellowship Committee:

Chair (Continuing): Peter Frise
President
President-Elect
Secretary-Treasurer
Members-at-Large:
Continuing: David Coleman
Continuing: Ken Putt
New: André Bazergui
New: Lorraine Whale

There being no alternative nominations from the floor, it was moved by J. McLaughlin, seconded by C. Laguë, that this slate of members for the Fellowship Committee be approved. **CARRIED.**

As an information item, R. Marceau reported the names of CAE Fellows serving on the CAE Nominating Committee, as well as those serving as CAE representatives on the CCA Board of Governors and CAETS Board of Directors (2015).

10. REPORT OF PRESIDENT-ELECT

In the absence of the newly elected President Pierre Lortie, newly elected President-Elect Doug Ruth assumed the chair for the remainder of the meeting. He reported that P. Lortie wanted to

thank R. Marceau for his dedicated leadership during the past two years and all that the CAE was able to accomplish under his governance. A round of applause supported this appreciation. D. Ruth then highlighted key points from P. Lortie's report, which follows in its entirety:

Richard Marceau has been a formidable President of the Canadian Academy of Engineering. Under his leadership, two local sections have been established, our involvement in the Trottier Energy Future Project has been reset on a sound footing, the Task Force on Engineering in Canada's Northern Oceans has accomplished much progress and, to cap his outstanding accomplishments, Richard, in cooperation with Dr. Clem Bowman, have published "*Canada: Becoming a Sustainable Energy Powerhouse*", the report of their Energy Pathways Task Force. Despite the enormous burden created by his health condition, Richard has remained engaged in the affairs of the Academy and continues to provide counsel and encouragement. Frankly, the Academy is better because Richard was at the helm.

A CHALLENGE

Canada would be a better place if evidence-based policy was the accepted norm in public policy making. This raises the question: is this a quixotic challenge? For sure, managing the interface between science and technology, society and public policy has proved a daunting task around the world. Reflecting on the course of affairs in recent decades, one forms the sentiment that the debates in Canada and abroad within the scientific communities were mainly on governance and political legitimacy of science and technology, failing to distinguish policy for science from science for policy, to recognize that science and technology have limitations and, therefore, accept that their most valuable contribution is to inform policy, not make it.

The mission of the Canadian Academy of Engineering is to provide leadership and expert advice on the implications of strategic choices about the potential of technology, engineering, design and innovations, their economic effects and to enhance, through the application and adaptation of scientific and engineering principles, the well-being of Canadians and the creation of wealth in Canada.

There are very few examples where natural science and technology can alone inform sound public policies. The establishment of the Canadian Council of Academies in 2002, an umbrella organization formed to coordinate and facilitate the participation of Fellows of the Royal Canadian Society, the Canadian Academy of Engineering and the Canadian Academy of Health Sciences who are recognized experts of the topic under study, was the answer to the need to ensure the relevance of the expert advice. It is fair to say that the assessments made over the years have generally complied with the standards of balanced, evidence-based and independent advice.

Notwithstanding the significant contribution of the CCA to sound public policy making since its inception, the fact remains that the Council is dependent on "government money" and, consequently, acts mainly in response to specific requests made by policymakers. There is no doubt that this is an important and valuable role and that the CAE contribution to the work of the CCA is in line with the purpose of our Academy. However, we must not delude ourselves that this useful but limited contribution of the CAE meets our mission which is **to provide leadership....**with respect to the economic, environmental and societal implications stemming from the science and technological dimensions of policy choices.

A PATH TOWARDS A LEADERSHIP POSITION

It may seem paradoxical but the first step in the journey towards an influential leadership position in the Canadian polity depends on the ability of the CAE to promote cross fertilisation between industry, academia and public administration, in Canada and through international collaboration with foreign academies. Alone, it is unlikely that the CAE can attain the stature and respect its Fellows yearn for their Academy. We must join forces with similar organizations that are equipped to contribute to the analysis and elaboration of evidence-based policy through expert advice complementary to the one our Fellows can provide.

This is clearly the case with our sister academies. Hence, the need to strengthen our cooperation and multiply joint endeavours with them. We also need to reach out and partner with other organizations recognized for the depth and quality of their expertise in policy analyses where natural science and technology constitute a significant dimension of the matter under study.

In pursuit of this goal, we have initiated extensive discussions with the Conference Board of Canada to organize a series of joint conferences on issues of considerable importance for the future well-being of Canadians. These joint conferences will be structured around two themes: industrial competitiveness and infrastructures.

The first theme, industrial competitiveness, stems from a growing recognition that competitiveness of Canadian industry and the role of technology in improving competitiveness are national issues. In these conferences, the role of technology in shaping the future structure of specific industries and the success of companies in global expansion would be considered. Also considered would be the role of design and technology in enhancing their competitiveness and their contribution to the Canadian economy. The conferences would aim at identifying the benefits and impediments to adding value to current activities and make recommendations for the future.

We envisaged a series of forums on individual sectors of the industry to be held across the country over the next 24 months, in a location where their center of gravity is located. For example, a forum on the oil and gas industry would be held in Alberta, for automotive in Ontario and for aerospace in Quebec. This approach would have the advantage of mobilizing resources and expertise residing in our regional sections. The main outcome of each of these forums would be a report outlining the path towards global competitiveness. It is also envisaged that a national conference will be held at the end to collect the results, identify the problems and solutions common to several or all sectors and develop a consensus for action.

The second theme would be focused on the adequacy of our infrastructures. Canada is facing serious infrastructure challenges which, if not addressed, will hinder our competitiveness, jeopardize our ability to take advantage of buoyant foreign markets and to diversify our export destinations and, because of their vulnerability to unforeseen climatic hazards lead to disasters of untold social and financial costs.

At the present time, we are considering a series of four national conferences on this thematic to be held over a period of 18 to 24 months.

In the coming weeks, the CAE will reach out to Fellows whose area of expertise and interests lie in the field of a particular industry forum to invite them to contribute to a discussion paper describing the relative position of the industry and the key challenges facing the sector, to participate in defining the program and to identify potential participants. The same process will be followed for the national conferences on infrastructure.

Some may wonder why the CAE does not undertake this program on its own. The fact is that, although the Academy is in a positive financial situation, it does not possess the resources needed to organize such a conference program and prepare the reports necessary to influence private and public decision-making nor the financial means to finance the endeavor. In the final analysis, this is a case where financial constraints lead us to a better approach that will enable 4

the Academy and its Fellows to exercise the authoritative and effective leadership role we are expected to play in Canadian society.

THE POLITICS AND PRACTICE OF SCIENTIFIC AND TECHNOLOGY ADVICE

At our last Annual General Meeting in Montreal, disturbing data on Canadians' attitudes towards hard evidence and rational debate was presented¹. Anecdotal reports, exceptional events and populism dominate policy debates and shape public opinion, a process amplified by the ubiquitous social media. Policy makers are very concerned by this evolution since it significantly curtails the range of options open for consideration and irremediably leads to policies likely to produce more damage than good. They are generally keen to arrest the debasing of scientific knowledge as a fundamental component of policy making but find it very difficult to blend the various strands of scientific advice and empirical evidence into coherent and implementable policies. They are confronted with the facts that policy decisions are strongly influenced by values and science is complex and does not provide complete answers.

Opportunities, constraints and dilemmas associated with scientific advances and rapid technological developments come to the fore in many countries. Scientific advice operates at the interstices of the policy and public domains, and is therefore subject to the vagaries of public discourse. From climate change to cyber-security, poverty to pandemics, food technologies to fracking, controversies continue to erupt at the boundaries between science and society.

In many countries, we see the politics of scientific advice being actively debated. Next August, the International Council for Science will host the first international summit on scientific advice. Exploration of these issues needs to be undertaken anew in Canada. The CAE should take the lead in organizing a national conversation on the importance of evidence-based policies and the best approaches to embed sound scientific advice into policy making as a matter of course. Canadians are fortunate to live in a knowledge-based society. This permeates all sectors of activities, including our governments and parliaments. Consequently, we should also examine the issues related to capacity building in the science-policy interface. The objective should be to develop a consensus for an effective science advisory process that leads to better government decisions, minimize crises and unnecessary controversies, and capitalize on opportunities to improve the quality of life of Canadians, while creating value and wealth.

Here again, a series of fora across Canada that would bring together our Fellows concerned by this state of affairs, practitioners in the art of policy making and other experts would appear to be the most effective venue. Clearly, an interdisciplinary approach is an absolute necessity.

Our sister academies would be invited to join and support the effort as well as institutes of public policy with experience in this area.

CONCLUSION

The CAE has done an excellent job over the past years. Much of this success is due to the outstanding contribution of Kevin Goheen and our dedicated staff.

For the future, there is no doubt that the management of the ambitious program I outlined which focuses on the articulation of evidence-based policies and action plans to strengthen the international competitiveness of Canada's industries, to ensure that our infrastructures meet in the most efficient way our economic and social needs and are resilient and able to contain natural disasters and to promote the use of sound scientific advice in policy making will place a significant administrative burden on our staff. For this is not their only task.

The program calls for the participation and sustained commitment on the part of our Fellows. This is as it should be: the Fellows make the CAE and not vice versa. The purpose of the CAE is to recognize and to bring together the most successful and most talented engineers from all areas of engineering sectors to provide independent and expert advice on issues of national importance pertinent to engineering and technology. Thus, it is our collective and individual responsibility to bring our experience and knowledge to bear on issues of vital importance to Canadian society. And for the CAE, its role is to provide Fellows with the means and mechanisms to make this happen.

¹ Graves, Frank – *Shifting Social and Economic Outlook*, presentation to the Canadian Academy of Engineering, EKOS, June 2013

D. Ruth then asked the Fellows of the Academy to support P. Lortie and his efforts on behalf of the CAE.

11. ANNUAL GENERAL MEETING ARRANGEMENTS – 2015

President-Elect Ruth announced the Greater Toronto Area / Hamilton as the location of the next Annual Meeting in June 2015. The Board may need to revise the date and venue as the year advances.

12. OTHER BUSINESS

President-Elect Ruth proposed a vote of thanks for the retiring members of the Board, Larry Staples and Kim Sturgess; and retiring member of the Fellowship Committee, D. Whitmore.

13. ADJOURNMENT

There being no other items of business, D. Ruth thanked the Fellows for attending the AGM and declared a CONSENSUS for adjournment at 11:18 a.m.

INDUCTION OF NEW FELLOWS 2014

(Added for the record)

The Induction of New Fellows took place before lunch at the Sheraton Hotel Newfoundland. This year, 25 of the 49 newly-elected Fellows were able to be present at the Induction Ceremony, as well as one of the two new Honorary Fellows. D. Ruth read the citations as each inductee came forward, received their framed certificate from R. Marceau and had a photograph taken, and then signed the members' register and received a CAE pin. Those present were:

Paul Acchione	Baining Guo	Peter G. Noble
Jim Beckett	Nancy E. Hill	Ding-Yu Peng
Gilbert Bennett	Chris Huskison	Ross Peters
Xiaotao T. Bi	Janusz A. Kozinski	Shen-En Qian
Douglas A. Buchanan	Sri Krishnan	Dimitry Sediako
Kevin Englehart	Pierre G. Lafleur	Heather Sheardown
Clément Fortin	Claude Laguë	Yu Sun
Brian Garrod	Argyrios Margaritis	
Ray Gosine	Edward McBean	

Twenty-four other Fellows have been formally accepted for the year 2014, and will receive their certificates and lapel pin by mail. They are:

Jonathan Beddoes	Steve E. Hruday	Edward Sargent
Andrew Benedek	Earl A. Ludlow	Jeanette M. Southwood
Uwe Erb	Carmine Marcello	Afzal Suleman
Judy Fairburn	Lloyd A. McCoomb	Owen Tobert
Ibrahim J. Gedeon	Nicole A. Poirier	James Tranquilla
Clermont Gignac	Charles Randell	Arun J. Valsangkar
Feridun Hamdullahpur	Robert J. Reid	John Vlachopoulos
Terry W. Hennigar	Ted Robertson	C. Peter Watson