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Metric Commission Canada

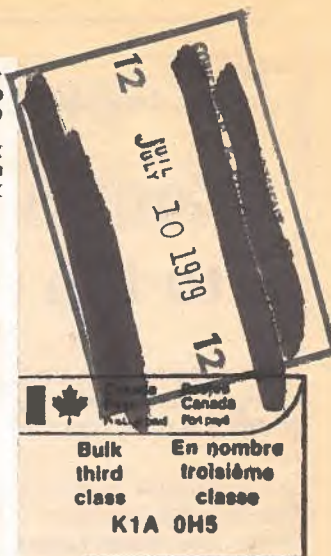
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## MCC chairman reports on metric conversion in U.K.

(Read story on page 5)

### Major Calgary condo project in metric

Sefel Properties & Development Ltd. are presently constructing Calgary's first major condominium development to be completely designed, tendered, budgeted and constructed using metric dimensions.

This 262-unit three-story walk-up apartment complex features six floor plans from which evolve 23 different unit sizes made possible by cantilevering.

Construction on the Cedar Ridge project, which is located in Lynwood, a S.E. Calgary residential area, began in September, 1978. At present 48 units are completed and occupied, with final project completion set for August 1979.

"Pleasantly surprised" seems to be the word of the day by everyone from architects and designers, The Chandler Kennedy Partnership, to the suppliers and sub-trades.

"The transition to metric construction has been virtually 100% trouble free," said Sefel Properties vice-president of construction, Bing Runquist. "In fact in areas such as estimating, it actually became easier and more accurate since we were only dealing in one set of measurement (millimetres) rather than several (fractions, inches, feet, and yards).

Some of the trades were skeptical at first, but once construction began and the imperial tape measures were thrown away to avoid the mistake of wanting to convert from metric to imperial, everyone discovered that metric was handy to use.

All of the 262 framing units were

prefabricated and no errors were found that could be attributed to the metric system. Wall sheathing, stud lengths, and drywall are the three major areas where sizes change slightly. Plywood & drywall is supplied in 1200 mm x 2400 mm size with studs and joists at 300, 400, and 600 mm spacing. Metric studs, of course, are slightly shorter being 2310 mm in length. Other lumber widths and thicknesses have not changed in actual size but are simply called 50 x 250 rather than 2 x 10.

Mr. Runquist added that Sefel Properties & Development was definitely convinced that SI is here to stay. They were so impressed with the ease of metric construction that they advised the architects who had already started work on two other projects to change work in progress to metric. Mr. Runquist hopes that through Sefel Properties' "leadership", other builders will follow suit in order that we can all soon enjoy the benefits of SI.

#### Metric construction throughout Canada

Mr. F.N. Walsh, chairman of Sector Committee 8.20, Wood, reported at the last meeting of the steering committee in April that some prefabricators or house builders have switched to metric and he gave the following examples: Nelson Homes, Lloyd Minister, Brawn Saskatchewan, Webb Homes Yorkton, Northern Construction Manitoba, Coupar Montreal, Tampahall Ayr (Ontario), Muttart, and Halliday Homes Ontario.



Metric construction in Calgary, Alberta.

## White House strongly supports metric conversion

Here is a transcript of remarks made by David Rubenstein, deputy assistant for U.S. Domestic Affairs & Policy at the White House, at the American National Metric Council's Fifth Annual Conference held in Washington, D.C. in April, 1979.

I am pleased to be here this morning to speak to the American National Metric Council.

I would like to make three basic points. First, the Administration believes that there are significant benefits from metric conversion; second, the Administration supports a strong interpretation of the Metric Conversion Act; and third, the Administration is taking steps to encourage metric conversion,

both in the government and in the private sector.

Let me be more specific about each point. Those of you in this audience know better than anyone else in the country of the long-term benefits from metric conversion. I can assure you the Administration is catching up with you, and there can now be no doubt that the Administration clearly recognizes the importance of metric conversion.

First of all, metric conversion will enable us to enhance our competitive posture in world markets. In recent years the United States has suffered significant trade deficits. Last year we had the worst trade deficit in our history.

There are many reasons for that problem (ranging from our gluttonous appetite for oil to restrictive trade barriers abroad). I do not want to claim that had we been on a full metric system, we could have avoided sizable trade deficits or cured inflation. But I do think it is beyond dispute that had we been on the metric system, we would have been able to better penetrate foreign markets, to compete with European and Japanese manufacturers, and to pursue our export policy in a much more aggressive and successful way.

The effects are just as well known and unfortunate — greater inflation, a weakened dollar and a decline in our economy's strength.

The sooner we do convert to metric, the sooner we will be able to compete on an economic basis with other countries for export markets, and the sooner we will be able to reduce our trade deficit.

Second, metric conversion provides an opportunity for businesses to increase their efficiency as they undertake conversion plans. In many ways, American business suffers from a low rate of productivity or efficiency. Obviously, much of that extends beyond simple machinery and tools. However, to the extent that equipment is outmoded and inefficient, metric conversion presents an opportunity to purchase new equipment which is more efficient and pro-

ductive. We believe that opportunity should be seized.

Third, the existing system of measurement used in this country is often misunderstood by consumers. We need a system of measurement that is clearly understandable, is based on reason and rationality, and is capable of allowing consumers to make intelligent and informed decisions. We need a system which offers a sound comparative base for consumers. Our current system often does not allow that. Of course, conversion to metric will present some confusion — any conversion to any system

(To page 4)

## Case History No. 10

# Conversion of lumber to the metric system

This is the tenth in a monthly series of case histories illustrating the findings of various learning theories coupled with practical experience in Canada and other countries converting to metric.

by P.C. Boire  
Executive Director  
Metric Commission Canada

Sector 8.20, Wood, was one of the first sectors to develop its plan and in June 1975 hoped for developments in the United States to lead on to hard conversion. The Canadian lumber industry has agreed to meet the metric needs of the construction industry in Canada. It also has a commitment to the export market in the U.S. Roughly 60% of all softwood lumber produced in Canada and 12% of the hardwood lumber is exported to the U.S. Conversely 99% of all softwood lumber imported into the U.S. comes from Canada. The Canadian industry therefore must take an interim step to accommodate the market at home and abroad while it implements its own conversion program.

The Canadian lumber industry has adopted a policy of producing existing sizes and lengths for the U.S. market until a conversion to metric dimensions can be coordinated with the U.S. During the interim period the Canadian industry will market the existing

sizes and lengths in metric terms in Canada.

Sub-committees were formed within the framework of Sector Committee 8.20 to study product areas such as softwood lumber, hardwood lumber, and panels. These committees are composed of industry and industrial association representatives who were asked to make recommendations to the main committee on how to implement the policy that the national committee has established. The sub-committees worked closely with individual companies in the sector and developed recommendations. The plywood panels will be hard converted to 1200 mm X 2400 mm as the demand develops. The sector as a whole will produce existing customary sizes for the U.S. market on one hand and existing sizes in metric terms for the Canadian market on the other. A metric handbook for Canadian softwood lumber sizes and lengths has been produced.



light winds  
20 km/h & under  
Wind felt on face; wind extends light flag; leaves rustle and move.



moderate winds  
21 - 40 km/h  
Raises dust and loose paper; crested wavelets form on inland waters; fine loose snow begins to drift.



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# Letters

## Knots and nautical miles are in to stay

I am concerned with the news media's continued use of the kilometre and km/h for speeds when reporting a story having a maritime or aeronautical background. The Canadian Press Style Book says that "distances travelled by ships may be provided in nautical miles and ship speeds in knots. Do not convert". If the CP Style Book says not to convert, then why do they turn around and do just exactly that?

As we all know, the Earth is divided into 360 degrees. But the degree is an awkwardly large unit to use, and so it was divided into "sixty minutes"; the minute was further sub-divided into sixty seconds as well.

It was found, centuries ago, that the 'minute' of arc on the Earth's surface was only about 15% larger than the statute mile; and so, since ships at sea needed to call this unit of distance something, they called it a "nautical mile". As we can see, it is not really a mile at all: It is, to be completely correct, "one minute of arc on the Earth's surface". But 'nautical mile' was easier to say, and also made it impossible to mistake the minute of arc with the minute of time.

In order to determine how fast they were going, the navigator on an old sailing ship would throw overboard a small sea-anchor with a length of rope attached. By measuring the length of rope that played out in a specific length of time, the speed of the ship could be determined. In order to make the length of rope easier to determine, the rope had a knot tied in it at pre-calculated distances along its length. Thus, if six knots of rope were played out, the ship was travelling at six nautical miles an hour; and it would then take ten hours to travel sixty nautical miles, or sixty minutes of arc, which would then equal one degree.

We don't use knotted rope anymore, obviously, but we still do use latitude and longitude. And until we decide to change latitude and longitude to some kind of metric unit, then we will still — and always — have to use nautical miles for aeronautical and marine navigation distances and speed determination.

(Excerpted from a letter by R.T. Silver, Victoria, B.C.)

Dear Mr. Silver:

Thank you for your letter outlining your concern over the

Canadian media's usage of kilometres per hour instead of knots and nautical miles in aeronautics and navigation.

A July 1978 survey conducted by Metric Commission Canada indicated that 5% of radio stations reported windspeeds in knots versus 71% reporting in kilometres per hour. Those reporting in knots, naturally enough, were located on the Pacific and Atlantic coasts. More of the television stations reported in knots with 83% reporting in kilometres per hour.

You are entirely correct in saying that the knot and the nautical mile are used by the aviation industry and the water transport industry for navigation and associated weather reporting.

Air transport are drafting an international proposal to retain the knot and nautical mile until some time in the 1990s, with no specific date given at this time.

Water transport are currently utilizing these two units in accordance with an agreement of the International Hydrographic Organization. There are no specific plans at this time to change these units.

## Dual weather reporting slows down learning

I am one hundred percent in favour of Celsius and metric and am certainly in favour of Canada being fully metric. I am quite disappointed at what has happened to Celsius as the weather office is trying to make the two systems into one.

Now here in Peterborough we have a TV station CHEX, that for the past three years has been giving weather in Celsius only. Last week the announcer said something new has been added, we are going to introduce the use of Fahrenheit on our daily weather broadcasts. After three years of Celsius only, they introduce the use of Fahrenheit. Well to my way of thinking this is throwing it backward twenty-five years.

In 1966, I moved to Australia and I was there during much of their conversion. In 1966, they converted from the pound sterling to the dollar. We were being paid in dollars but most of the men calculated backward into pounds and this was because stores were using a double standard of advertising. They were advertising in both dollars and pounds. When the people saw the pounds they were naturally going to stick to the pounds — what they knew. Finally after three years, the Government realized that it had made a mistake by permitting the double standard. So they then made it illegal to advertise in pounds and if you did you were under a stiff penalty.

Now as soon as the pound signs disappeared everybody began to speak dollars.

By this time it was 1969 and they were switching over to Celsius so the next move was to Celsius. We started it in June and the weather was given in Fahrenheit-Celsius. In July it was given in Celsius-Fahrenheit and in August it was given in Celsius only but they did continue to put Fahrenheit in brackets for the month of August. That made the three months. That was the end of the double standard. Beginning in September

Fahrenheit was not permitted on TV, on radio or newspapers. And the word Celsius was dropped as they said there was no reason to use the word Celsius if there was only one official system you did not need to use it. And in one year the whole of the country began speaking Celsius. And I came home.

While I was in Australia there was an interview one night on TV in Sydney and this interview was with an elderly lady. She was eighty-five years old and the man that was doing the interviewing was approximately fifty to fifty-five and the elderly lady kept calling him "Sonny". During the interview he said to her "You must find it hard changing to Celsius" and she quickly asked "Why?" Now Australians are very blunt: "I'm a lot younger than you are and I find it hard." But she very quickly said "But I'm not retarded." He then asked her "How do you calculate..." But before he could go any further, she cut him off, she just cut right in and said "We don't calculate because if you try to calculate back to Fahrenheit you never will learn". He was a bit embarrassed by that. He said to her "Well, are you sure you don't sneak a look at the Fahrenheit side of your thermometer once in a while". Well, she said "You can't do that, Sonny. My husband and I went to all the shops in our district until we found a thermometer with Celsius only and that is what we are using".

Karl B. Montgomery  
Peterborough, Ontario

Dear Mr. Montgomery:

Thank you for your very comprehensive letter outlining your concern for Canadian metric conversion, particularly as it applies to weather reporting in Peterborough, Ontario.

I read with interest your experience in Australia, and we have found, as you have, that dual

reporting only helps to retard metric conversion.

Last year it was believed that some stations were lapsing into dual reporting after voluntarily commencing in 1975 to report exclusively in Celsius. Metric Commission Canada undertook an extensive survey of 82 Canadian television stations and 441 radio stations to determine the extent of metric usage in temperature, barometric pressure, windspeed and precipitation. The results of this July 1978 survey were more extensive than the survey conducted in 1975 after broadcasting stations converted. The 1978 survey revealed that 76% of radio stations were reporting in Celsius, slightly down from our first reports, with 23% reporting in dual. The only station reporting in Fahrenheit exclusively was CKPR/AM and CHSD/FM in Thunder Bay, Ontario.

We have recently learned that their policy has changed and they are now reporting in dual as a result of our information directorate contacting them — we don't consider this much of an improvement, however.

Considerable discussion continues to take place with broadcasters as to why they continue to report in dual, since it only makes the establishment of metric terms more difficult.

They know that people will continue to use that which is more familiar and that they are retarding metric conversion. However, they continue to reason that they must also consider their American audience. When American stations go metric, this rationale will no longer prevail and they will have to use Celsius only or find another excuse or reason for not doing so.

Thank you for your comments on metric conversion and please be assured that we will continue to promote the use of Celsius only through every legitimate means at our disposal.

# Will metric conversion yield a payoff in chemical sector

Ever since the Metric Conversion Act passed in 1975, domestic chemical producers have grappled with two questions of primary concern: what will chemical metric conversion cost and how long will it take?

Recently in Washington, the chemical sector of the American National Metric Council (ANMC) came up with some tentative answers. Based on the Canadian experience, the tab to convert U.S. industrial chemical production and distribution to metric could cost \$250 000 000. And the task is expected to begin in earnest by 1981 and will be essentially complete by 1984. The occasion was the Fifth Annual Conference of the ANMC, a private organization concerned with coordinating metric conversion.

Metric conversion in Canada is well ahead of the U.S. pace, and Canadian chemical producers formally converted to metric in April. The estimate for the cost of conversion was developed by E. Nelson Vrooman, executive assistant to the president of Cyanamid Canada, Inc., now grossing 190 M\$/a (million dollars per annum) spread over the basic lines (agriculture, pharmaceuticals, industrial chemicals, building laminates and consumer items).

Cyanamid Canada, says Vrooman, spent \$400 000 on conversion, excluding consumer-product lines. Of that, \$180 000 was attributed to non-cash expense such as employee time spent in planning and implementing metric conversion and in related travel and training. Hard cash (out-of-pocket) costs totaled \$220 000 including \$104 000 for modifying equipment, systems and data bases, and \$53 000 for new dies, plates and artwork for packaging.

The four-year metric conversion program has already yielded tangible benefits. Savings from packaging rationalization are running 60 000 \$/a. As a result, Cyanamid has recovered 60% of its total cost so far, and ultimately will show a "profit" on metric conversion. Hard to quantify benefits such as reduced error probability, easier formulation changes and standardization are not included in Vrooman's cost data.

Using sales ratios as a base for extrapolation, Vrooman puts the cost of Canadian metric conversion at \$17 000 000, and for the U.S. chemical industry at \$250 000 000. Similarly, the estimated annual savings are \$2 500 000 in Canada and \$37 500 000 in the U.S.

Estimates of Canadian chemical conversion cost prepared by the chemical sector of the Canadian Metric Commission differ significantly from Vrooman's estimates, says sector chairman Roy Duxbury, who is also technical director for 3M's Canadian operations. Duxbury, however, declined to say whether Vrooman's estimates were higher or lower than the sector's figures. But Duxbury stresses the necessity of metric-only cost allocation in such calculations.

The experience of keeping metric conversion costs low, and even of turning conversion to profit, is by no means unusual. In 1973, Du Pont converted neoprene packaging, settling on a 25 kg sack for both domestic and foreign shipments, says E.P. Torpey, manager of commercial and customer service for the firm's Elastomer Chemicals Dept. Du Pont, in making the switch to 25 kg sacks from 50-lb. bags, recovered its conversion cost in less than a year and has since been saving \$200 000 annually because of elimination of dual inventory for foreign and domestic accounts, and improved distribution efficiency.

Last year, when the ANMC chemical sector issued a revised industry conversion plan, some chemical firms were chagrined to find the scheme called for all bulk-chemical shipping and billing to be substantially converted by Dec. 31, 1980. As a result of further plan refinement, the new date, January 1, 1981, is suggested as a readiness target date to begin heavy metric conversion. Slippage has also occurred in completing a final form of a draft list for suggested metric package sizes, although the list is due out soon.

The pace of U.S. metric conversion may be in for fast accelera-

tion. David Rubenstein, a White House aide, put the Carter Administration staunchly on record in favor of metric conversion for industry and government. (Read on page 1 of this issue.) And Congressman Robert McClory promised to push a tripling of the present \$1 500 000 budget of the U.S. Metric Board, the federal coordinating agency for metric conversion. McClory is the ranking Republican on the Judiciary Committee, and a metric advocate.

(From *Chemical Week*, April 11, 1979)

## Conversion costs cannot be extrapolated — Duxbury

During a telephone interview he gave the *Monitor* in May, Mr. Duxbury made the following comments regarding metric conversion costs:

"To get a pure conversion cost is virtually impossible because of the difficulty of isolating only those costs which are predicated on a one time unusual expense associated only with a conversion activity. Machinery has to be replaced on an ongoing basis and costs incurred independently of conversion. If metric capability is included in a new machine replacing an old one, it is not fair to add the total expenditures to metric conversion. Often the effect of metric conversion is to speed up the timing with respect to making those expenditures.

Experience indicates that the cost of collecting such pure accounting data exceeds the cost of conversion itself. "The primary concern I wished to express at the ANMC conference in April was to emphasize that the figures quoted by Mr. Vrooman were by no means typical of those we have knowledge of in the case of Canadian chemical manufacturers who have converted. I would not hesitate to pass judgement without assurance that Mr. Vrooman's figures were developed in such a way that they were pure and simple conversion upcharge only.



Roy Duxbury  
Technical Director  
3M Canada Ltd.

Even if we can get a good figure for one company we can't extrapolate it to other companies, whose nature of operations can be quite different. It's even worse to scale up the figures obtained in Canada to the total in the U.S.A."

## Training the trainers in Fredericton

Training the trainers was the theme of a two-day metric workshop for all New Brunswick community college instructors held recently in Fredericton.

Special guest speaker at the seminar grouping some twenty-five participants from nine different communities in N.B. was Pat Ganapathy, assistant director of engineering and industries plans at Metric Commission Canada. Main speakers included A. Martinek, chairman of programs at Conestoga College of Applied Arts and Technology (Kitchener, Ontario), Peter Jones, director of metric conversion at the Canadian Government Specifications Board in Ottawa, and Albert Heckel, who has just been appointed metric coordinator for training for N.B. community colleges.

Under the chairmanship of Doug Neilson, director of the N.B. metric information office, the attendees reviewed the metric system and matters relating to specifications and standards. These twenty-five instructors will in turn offer evening courses in their community colleges to anybody needing assistance or guidance during the changeover to metric.



Participants at the seminar in Fredericton, I. to r., first row: Pat Ganapathy, director of engineering services plans, MCC; Sterling Goddard and John Wadman, instructors, N.B. Community College, Moncton. Second row, Ralph Smith, Edward McIntosh and Paul Boudreau, instructors, N.B. Community College; and Doug Neilson, director of the N.B. Information Centre, Fredericton.

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# Metric recipes for Hamilton schools

by Judi Binns

How can we "go metric"? About five years ago this was a question often repeated by the different teachers' groups with whom I work. The enthusiasm was present, but the tools and means of taking it practically into the classroom were slower in coming.

One area which soon had measuring utensils available was that of food preparation. However, the recipes from which to prepare foods were definitely not readily available.

It was this dearth of appropriate recipes from which to choose which prompted my making a proposal to the Ontario Government's Experience '76 program for funding of a summer project to test and write-up metric recipes.

The proposal took shape, was approved and the wheels began to turn. A project leader was hired from among student applicants and subsequently five area secondary students were also hired to comprise the team.

The Ontario Ministry of Education and the Hamilton Board of Education jointly sponsored the project. The team located in one of our local high schools (Sir John A.

Macdonald Secondary School) and immersed themselves into the various aspects of this operation for the months of July and August of that year.

One of the more exasperating aspects of the project for the team was having to acquire enough people to comprise a daily taste panel (10 people) for the five different recipes prepared each day! They were required to revise and repeat those recipes which did not meet a level of acceptance either by appearance, taste, or degree of ease of preparation.

The original metric ingredient lists had been done by the team leader prior to July according to the Canadian Home Economics Association's *Style Guide for Metric Recipes*.

The resulting collection of 200 tested recipes was duplicated and distributed to all the Family Studies teachers that fall. Copies were also available to other Grades 7 and 8 teachers who were using recipes as a tool by which to teach metric. Included in the book are recipes for appetizers, meat, fish and egg dishes, pasta, casseroles, salads, sandwiches, vegetables, breads, and desserts.

That first printing was subsequently edited in order to conform to correct metric usage.

With the increasing spread of the use of metric measures the need for more senior recipes became evident. Thus, a proposal for a similar project was devised and submitted then approved for an Experience '77 project.

The result of this second similar project was another some 200 metric recipes for secondary school Family Studies classes.

This resulted in a new edition and together with the microwave section, they comprise a 3-ring bound volume entitled *Recipes for Metric Moments*. This book is printed in quantity and they are available on request at a cost of \$8.75 (\$7.95 plus shipping and handling).

Anyone interested is invited to write to me requesting the number of copies and stating to whom the shipping and billing be directed:

Mrs. Judi E. Binns  
Family Studies Supervisor  
Hamilton Board of Education  
100 Main Street West  
Hamilton, Ontario  
L8P 1H6.



Judi Binns shows "Recipes for Metric Moments"

## In Edmonton

### Seminar in sporting goods industry

A seminar sponsored by the Alberta Government Services on the use of metric in the sporting goods industry was held in April in Edmonton.

The one-day seminar, under the chairmanship of Jack Kyle, deputy minister of Government Services for the province of Alberta, gave some 25 suppliers, manufacturers and retailers from the sector a good idea of metric conversion in the sporting goods industry.

P. D. Hatton, chairman of sector committee 7.42, Sporting Goods, from Brunswick International, outlined the sector's progress in metric conversion;

Paul Alfors, sector plan manager, Metric Commission Canada, gave an overview of the metric conversion program;

D. Grant, from Cooper Canada Ltd., spoke on the effects of metric

conversion on the manufacturer; Howard Tremaine, from Simpsons-Sears Ltd., spoke on the effects of metric conversion on the retailer;

V. J. Pelisek, director of information, Metric Commission Canada, spoke on the metric system in general and outlined the information materials available from Metric Commission Canada to all persons engaged in a metric conversion program.

Sector 7.42 is composed of representatives of the Canadian Sporting Goods Association, the Canadian Sports Administration Association and the Sports Federation of Canada. There are approximately 150 manufacturers of sporting goods in Canada, employing more than 7500 people with sales valued at \$219 000 000.

## U.S. must face international technical and trade reality — ANSI

"The day is fast approaching when conventional U.S. measurement units and product sizes will no longer be accepted in international standards," says Frank J. Feeley, Jr., President of the American National Standards Institute (ANSI).

"This nation must face international technical and trade reality and join the rest of the world in the adoption of metric units or decide to become an isolated island of non-metric measurement."

Mr. Feeley's remarks were made

in Washington at the bimonthly meeting of the U.S. Metric Board, the federal agency charged with coordinating voluntary conversion to the metric system.

ANSI is a voluntary non-profit organization that coordinates the development of engineering and related standards. It is a federation of over 200 professional, trade, technical, labor, consumer, and governmental organizations as well as 800 individual firms representing every facet of commerce, trade and industry. ANSI is the

official U.S. representative at international standards and measurement meetings of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC).

"The questions might well be asked," Feeley said, "are we not establishing unplanned technical barriers to both imports and exports that will in time prove to be still another factor in the increasingly unfavorable U.S. trade balance?"

## White House (From page 1)

would do that. But in a short time, the simplicity and beauty of the metric system will ensure a measurement system that all consumers can understand and use wisely.

Fourth, it is an embarrassment that the United States is the only major country in the world to still be on a system of pounds and inches. Even Great Britain, which originated our system, has converted. The United States, because of our size and our wealth, will always be a world leader. But, our claim to world leadership clearly suffers when we are a century behind the rest of the world in the method of measurement. It is becoming increasingly difficult to justify and explain this anachronism to our allies and friends abroad.

The message I want to give to you today is that the Administration recognizes these important reasons which underlie the need for metric conversion. The benefits are clear, and there should be no doubt that we are fully cognizant of them.

The second basic point I'd like to make today is that the Administration does fully support a strong interpretation of the Metric Conversion Act of 1975. That Act is a landmark statute in helping to convert voluntarily this nation's measurement system. We believe this Act is a sound Act, an Act which should not be run away from, an Act which should be followed willingly, and an Act

which clearly is in the nation's best long-term interests. Today, we have done what we can to ensure the Metric Conversion Act is implemented according to its clear intent and spirit.

Under the Act, we have appointed outstanding members to the United States Metric Board — members who represent all citizen interests affected by metric conversion. We look to them to help plan metric conversion so that, as the Act intends, it will be done reasonably and will maximize benefits while minimizing costs. We need your active support to help us, and I have come before you today to ask you to help us and the Metric Board implement the Metric Act and assure a sound, responsible conversion to metric.

Third, the Administration is working to encourage conversion in a responsible manner in both government and the private sector. The history of metric conversion in this country has been plagued by a government which either had other priorities or was reluctant to engage the American people in the activity needed to ensure a successful conversion. We are attempting to reverse that; we are attempting to provide leadership in the metric area; we are attempting to make the government a model of metric conversion.

Of course, we also have other priorities. Fighting inflation is certainly one of them. But we believe

metric conversion can be accomplished in a non-inflationary manner if the government lends its weight, its leadership and its expertise to this effort. We intend to do this and we have already begun. Throughout the government, efforts are underway to begin the transition to a metric system and we are working closely with private industry and metric experts to ensure that the government is undertaking these actions responsibly and at the least cost possible.

We are also determined to work closely with the business community, labor, and consumers groups to encourage them to convert and to get others to convert. This is being done now by the Metric Board, with the strong and active support of such people as the President's consumer affairs advisor, Esther Peterson.

I am pleased to see that so many of you are equally concerned about metric conversion. I hope that next year when you reassemble, we can give you further evidence of the progress we have made and you can give us further evidence of the progress you have made.

min is the symbol for minute  
h is the symbol for hour  
km means kilometre  
m means metre  
cm means centimetre  
g means gram  
ml means millilitre

## Advertising standard ready in electronics industry

The Electrical and Electronic Manufacturers Association of Canada's *Standard Preferred Metric Terms for Use by the Canadian Consumer Electronics Industry in Advertising* has been prepared to meet the needs of the industry and of the general public in using metric.

The contents include metric terms recommended for use in consumer brochures, technical descriptions, operating instructions and advertising.

Sector Committee 3.02, Radio, Television, Communication, Electronic Equipment and Parts, has identified that consumer electrical and electronic products would be offered to the consuming public in metric terms from April 1, 1979.

The EEMAC and Consumer Electronics Industry supported that date. It is pointed out however, that certain accessories or related commodities such as pre-recorded records, may be supplied from other sectors of industry having different conversion dates. When referencing such items it may be best to include both units (metric and imperial) temporarily.

This standard has been prepared by the CEI Engineering Committee in close cooperation with Sector 3.02 and is available at a cost of \$3 from the

EEMAC  
One Young Street  
Suite 1608  
Toronto M5E 1R1  
(416) 862-7152

## University of Alabama opens information centre

Ernst Lange, metric information officer for the University of Alabama in Huntsville, says a metric information office was opened recently in Huntsville in order to promote the metric system and to help make the transition to metric as smooth and economical as possible.

The office provides information on metric in general as well as in the fields of standards, education,

business, agriculture and others. The information material available includes literature on the metric system and includes reports from foreign countries which have already converted to metric.

Also offered are films and audio-visual aids and access to computer terminals of the Defence Documentation Center, NASA Data Center and Educational Resources Information Center.

# Next step in the U.K.: conversion in consumer area

The following remarks were made by Metric Commission Canada chairman Sandy McArthur at the recent 50th MCC meeting held in Toronto.

I recently had a very interesting meeting with the chairman of the U.K. Metrication Board in London and with some of his Board members including the Board's foremost standards expert Prof M.L. McGlashan. We had a good meeting as the U.K. group were prepared with notes that they went over with us and I was rather surprised to find that they were somewhat more advanced than it had been my impression although there are some difficult areas still. I can just run quickly down their list to bring you up to date because I think it gives a slightly different impression than what you read in the newspapers; that may help in case there are more headlines, saying that they are not doing anything there and why are we still moving.

First of all, in the major engineering industries the Board feels that they have done all the metric conversion that they feel that they can influence directly. They feel that it's the end of their effective work and the balance of it is up to industry who will deal with their customers and if the customer wants metric they'll give him metric. And so they are pretty well pulling their horns in as far as the activities of the Board are concerned in relation to engineering industries.

In agriculture, it's pretty well all metric with very few problems. Milk production and agricultural marketing boards are all metric. The meat is all metric, except when it is moved from the wholesale to the retail area.

Scales in the large retail stores are changing over in large measure to digital, but they were not aware of whether or not these had a panel that could be pushed into

them, as the ones in Canada have, that would switch them into metric overnight. The smaller retailers are not changing over to digital too much, they are just keeping on with their old scales.

In other areas, road speed and distance signs, the government is reluctant to move and there is no indication of the timing when they will. They are estimating a cost of eight million pounds to change their road signs throughout the country.

On the other hand, though, it's compulsory to put dual speedometers on all their new cars. Fuel consumption is measured in litres per hundred kilometres in the specifications for their cars. In the fuel sales, they're having problems. They are still selling by the gallon and there are an awful lot of small rural pumps that are very very old and some of the people say that if they have to change their pumps, they'll just have to go out of business.

However, there are other things working in the same direction as they did here. The price of fuel in England is just nudging the one pound per gallon price and they think that quite possibly that is just going to push them over the hump and they will have to have new scales and maybe that will be the thing that makes the changeover.

Their major problem in the whole lot is in the retailers. There are 400 000 scales to be converted and they need a public relations program to convince people about it. They cannot go to a regional plan like we have because they feel the country isn't big enough—it is too interrelated throughout the whole country.

The other problem they're experiencing is that the scales people were not as cooperative as they were here in making their plans. Neither were the grocery people, so they got into great difficulties and they are really

getting their fingers burned over the whole thing because the warehouses at the docks, right at the moment, are suddenly full of Japanese and German digital machines. They presently do not meet the basic British government standards for an authorized weighing machine. But there is a very heavy lobby going on with a lot of pressure at the present time and the Board feels that it is just a matter of time before they are going to get that approval and the British manufacturers of scales will have missed the boat completely because the imports will flood the market at a price they can't compete with. On the other hand, the British scales makers haven't made the scales so these people have the scales already sitting in the warehouse waiting for legislation to come through so that they can use them. So they are getting themselves into a little bit of a corner.

They had the same experience as we had here somewhat with fabrics and carpets on a voluntary basis and unfortunately when they switched over to that it coincided with a slump in the carpet trade. And just as somebody said today that things go better if there is a big demand then you don't hear any little problems, especially metric ones. And that's what happened to

them — things got tough in the trade at the same time they started to switch over to metric on a voluntary basis and so a lot of them started to switch back. The other retailers saw this experience and they say they are not going to do it without government regulations. The government on the other hand and the Opposition are both for metric conversion in Britain but on a voluntary basis only. And the trade won't accept it on that basis so there they are — there is a stalemate at the moment.

The other thing that I might mention is that I had an indication that they are going to reduce the size of the Metric Board to about half the number that they've had on it because they feel they've gone as far as they can go. The big field that's left is the consumer area and they will move into that. The new chairman, Mr. Max Wood, was on the Board staff before. He is a consumer background man and so he is staying on as chairman to head up this last part of their changeover. And that's where it sits at the moment but I was rather surprised to hear that there had been considerable progress made, particularly in the meat and agriculture end and it goes right through packing houses, right down to

where they cut up the carcass to sell it to the retailer—it's all metric, right throughout. And a whole lot of these other things behind the scenes are metric but the front things like the speed limits and things like the weigh scales are not. That's where it sits over there now but it's a little better picture than we had before where it said in the headlines "Britain backing off metric" or something like that.

They are not backing off particularly, they've just moved further ahead, that's all. However, it is still just sitting in limbo in some parts.

One other problem over there — unfortunately, they started educating all the children in the schools in 1969 in metric. They've graduated 17 million students now through high school in metric and some of them are having to go back to some additional training in imperial units who are going to work in the consumer areas of industry. So now they're starting to integrate. They are not cutting out the metric training but they are adding some basic imperial training with it as well in the schools because of the problem of all these kids graduating in metric, and if they are going to university, or if they are going into some industry where metric has not been accepted, they are having trouble.

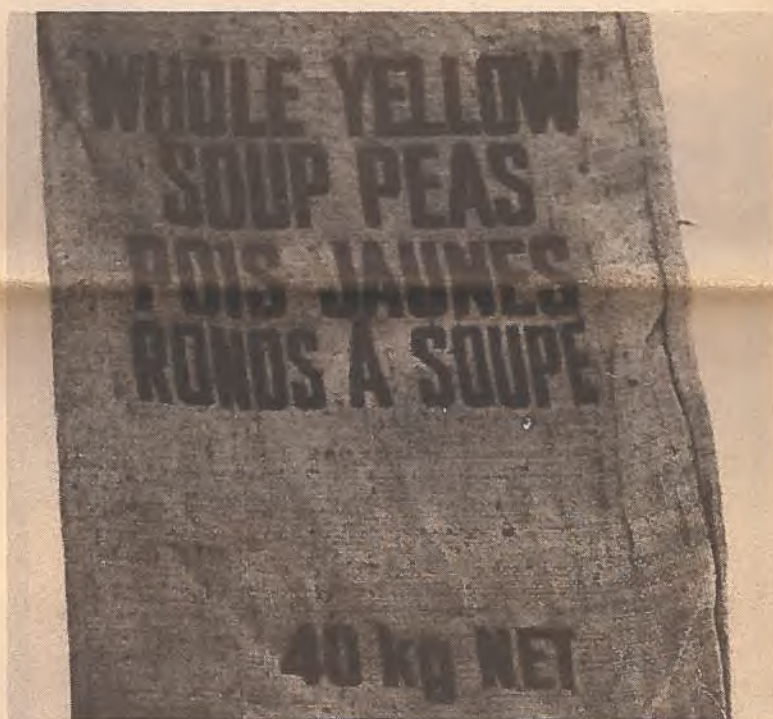
## Manitoba firm exports in metric

Back in the late 1940s, Mr. Alfred Roy opened a mobile seed-cleaning service for area farmers. When dry yellow pea production developed in the region, Mr. Roy started to buy, clean and ship whole peas to Eastern Canadian markets. In 1957, a pea processing plant and warehouse were built. In the early 1960s, a pea splitting line and a feedlot were added. There were four employees at that time.

In 1977 a new company, Roy Legumex Inc. was formed to build a new plant and to contract, process and market dry peas and other specialty crops from Southern Manitoba. Employment today varies seasonally from twelve to twenty-five persons.

The products exported include whole and split peas (green and yellow), lentils and other special crops such as fababeans and buckwheat, with new items to be added gradually over the next few years. These products are shipped in 25 kg, 40 kg, and 50 kg bags. Another product, rapeseed, is shipped in 20 kg bags. Sizing of lentils for certain markets is carried in metric units as follows: large — 6 to 7 mm, and regular — 5 to 6 mm.

The company's clients are located mainly in Belize, Guyana, Columbia, Venezuela, France, Germany, Hong Kong, Holland, Iran, Japan, Malaysia, Singapore, South Africa, Surinam, the United Kingdom, the United States and several Caribbean Islands.



Since 1976, more and more clients abroad and at home have been asking the company to ship in metric packs. The company gladly obliges since this has helped to maintain good relations with important customers and to keep large accounts in foreign markets.

The company reports internal conversion went without a hitch and was hardly noticed. In packaging operations, for example, all that was required was to adjust the

bagging scales when packing. The company believes that it is administratively more efficient to prepare prices and quotations when all those handling its products are using metric units.

Additional information about the company and its products may be obtained from:

Roy Legumex Inc.  
Dry Peas and Lentils  
St. Jean, Manitoba  
R0G 2B0.

## Handymen: why not put metric to the test?



Metric measuring tapes graduated in accordance with the Canadian Government Specifications Board standard and manufactured in Canada are now commonly available in stores.

## U.S. company plans to increase exports as a result of metric conversion

You have probably read the many stories published in past *Monitors* on Canadian companies increasing exports or opening new markets abroad as a result of metric conversion. (See this page for one of these stories on Roy Legumex Inc.)

These stories are discovered as a result of the activities of the Working Group on Metric Export/Import Trade. Formed in 1975 from within Metric Commission Canada's steering committees this working group's stated objective is to identify and make visible both existing and future trade opportunities arising out of metric conversion.

The story that follows on an American company planning to open new markets abroad seems to indicate that the same kind of export development as a result of metric conversion is taking place in the U.S.

Porter Precision Products, a Cincinnati-based producer of punches and ties adopted metric measure to expand its business in Europe in the 1980s, opening plants in England, Germany, Italy and France.

Currently overseas trade accounts for about as much as 10 percent of sales in a year.

Recently, Porter began making metric components for the pro-

duction of Volkswagen Rabbits at the German manufacturer's plant at New Stanton, Pa. The Rabbit is designed and built to metric dimensions.

Currently about 10 to 12 % of Porter's punches and dies are in metric.

For more details on the Working Group on Metric Export/Import Trade in Canada please write to

Metric Commission Canada  
Box 4000  
Ottawa, K1S 5G8



## A Measure of Good Taste

40 mL  
30 mL  
20 mL  
10 mL



a metric handbook for small business



A Metric Handbook for Small Business will help the owner or manager to convert to metric, help him provide his employees with appropriate training, and avoid unnecessary costs. For your copy write to Metric Commission Canada, P.O. Box 4000, OTTAWA, K1S 5G8.

### FLORENTINE FILLETS

500 g fish fillets  
1 pkg (340g) frozen spinach cooked, drained & chopped  
Salt and pepper  
1 pkg pimento cream cheese, cubed

15 mL butter  
15 mL flour  
Dash salt  
Dash white pepper  
175 mL chicken bouillon  
Paprika

Arrange spinach in a 1 L greased baking dish. Use 4 whole fillets or cut large ones lengthwise to obtain 4 long portions. Sprinkle with salt and pepper. Divide 1/2 the cream cheese equally over each portion. Roll lengthwise and arrange seamside down on spinach. Melt butter and blend in flour, salt and pepper. Gradually add bouillon. Cook, stirring constantly, until thick and smooth. Add remaining cheese and stir until melted. Pour sauce over fish and sprinkle with paprika. Bake at 230°C, 20 min or until fish flakes easily.

Makes 4 servings.



### CHEESY FISH SOUP

500 g fish fillets, fresh or frozen  
25 mL butter  
50 mL finely chopped onion  
250 mL finely chopped carrot  
100 mL finely chopped celery  
50 mL flour  
2 mL salt  
Dash paprika  
500 mL chicken bouillon  
750 mL milk  
125 mL cubed process cheese

Thaw frozen fillets about 30 min just enough to ease cutting. Cut fish in 2 cm cubes. Melt butter and sauté onion, carrot and celery until onion is transparent. Blend in flour, salt and paprika. Gradually add bouillon and milk. Cook, stirring constantly, until thickened. Add fish and simmer until fish flakes easily, about 5 min if fish is fresh and 10 min if fish is frozen. Add cheese and stir until melted.

Makes 6-250 mL servings.  
Food Advisory Division  
Agriculture Canada



## Company executives —

The Monitor would like to hear how you implemented conversion.®

Get in touch.

The editor



Rainfall measured in millimetres (mm)

3 mm

A light shower. Enough to settle the dust on the roads, but not enough to discourage children from playing outside or prompt golfers to come in off the course.

30 mm

A heavy downpour. Dirt roads will be slippery. Raincoats and umbrellas are in order. You won't need to water the lawn or garden for a few days.

## Upcoming meetings

79-06-01	Planning Sub-Committee 62.23	Toronto
79-06-01	Sector Committee 62.03	Vancouver
79-06-06/07	Intergovernmental Metric Conversion Committee	Whitehorse
79-06-07	Sector Committee 9.40	Stittsville
79-06-12	Sector Committee 8.30	Montreal
79-06-12	Sector Committee 7.42	Toronto
79-06-12	Sector Committee 5.01	Ottawa
79-06-13	Sector Committee 4.05	Toronto
79-06-14	Sector Committee 4.03	Toronto
79-06-14	Steering Committee 9	Toronto
79-06-14	Sector Committee 5.05	Ottawa
79-06-15	Sector Committee 2.04	Montreal
79-06-15	Intersectorial Kilojoule Committee 9.10	Toronto
79-06-19	Sector Committee 4.01	Vancouver
79-06-19	Steering Committee 62	Ottawa
79-06-20	Planning Sub-Committee 1.20	Toronto
79-06-20/21	Sector Committee 10.03	Charlottetown
79-06-21	Public Awareness Sub-Committee on Construction (Pascon)	Toronto
79-06-21	Sector Committee 2.31	Winnipeg
79-06-21	Sector Committee 1.03	Montreal
79-06-22	Sub-Committee on Home Furnishings 9.50	Toronto
79-06-22	Sector Committee 2.25	Toronto
79-06-26	Sub-Committee 9.60	Vancouver
79-06-26/27	52nd MCC meeting	Charlottetown
79-06-26/27	Sector Committee 63.03	Charlottetown
79-06-27	Sector Committee 2.22	Toronto
79-06-27	Sector Committee 9.60	Vancouver
79-06-27	Planning Sub-Committee 63.01	Toronto
79-06-28	Planning Sub-Committee 63.01	Toronto
79-06-28	Sector Committee 7.20	Montreal
79-07-05	Planning Sub-Committee 1.30	Toronto
79-07-11	Sector Committee 61.08	Winnipeg
79-07-10/11	Sector Committee 9.10	St. John's, Nfld.
79-07-17	Sector Committee 1.04	Calgary
79-07-20	Sector Committee 63.01	Montreal

## Exhibits

79-06-06/10	Exposition industrielle et commerciale	Rivière du Loup
79-06-22/30	Manisphere-Red River Ex	Winnipeg
79-07-03/06	Canadian Home Economics Association	St. John's, Nfld.
79-07-18/28	Klondike Days	Edmonton

## Sector Target Dates

### June

#### Sector 2.10, Iron & Steel Mills & Foundries

The manufacture of imperial-sized reinforcing bars by some steel mills will be discontinued in June except for special orders.

#### Sector 2.11, Fasteners Industry

The first six North American metric fastener standards will be published in June by the American Society of Mechanical Engineers. They pertain to a series of hexagonal head screws and bolts.

#### Sector 4.03, Petroleum Refineries, Wholesalers & Gasoline Service Stations

Fuel oil meters on delivery trucks convert to metric this month.

#### Sector 63.03, Soft Drinks

Metric conversion plan approved by MCC on June 26 in Charlottetown.

### July

#### Sector 3.10, Working Group on Scales in the Retail Food Industry

Scale conversion starts in the first three areas: Peterborough, Ont., Sherbrooke, Qué., Kamloops, B.C.

#### Sector 7.49, Luggage & Leather Goods

They convert to metric this month.

#### Sector 8.45, Paper & Allied Industries, Printing & Publishing

Paper mills will receive all raw materials in metric units by July 1.