

## Solar energy feasible within a few years

HALIFAX (CUP) — Within a few years, solar energy will be an economically sensible energy source for up to 70 percent of a household's energy needs, an undergraduate Engineering-Physics student said Saturday, Feb. 26.

Walter Wardrop said that the principal problem is "educating the people", who don't realize that fossil fuels will be almost exhausted by 2000. Nuclear energy is only a stopgap measure, he told an undergraduate physics conference, organized by the Atlantic Provinces Inter-University Council on the Sciences and Dalhousie University.

Canada has at least 12 solar houses, whose energy needs are met partially or completely by solar energy. But, Wardrop noted, Canada spends far less on solar energy research than the United States.

About 32 percent of Canada's energy needs are for heating air or water to temperatures less than 100 degrees C, the boiling point of water. Solar energy is ideally suited for such heating, he said. For the heating range between 100 degrees C and 140 degrees C, solar radiation must be concentrated, which makes it more difficult and expensive to use solar energy.

Solar energy can be stored by a number of methods, Wardrop noted. The simplest is to let the sun heat water on a wall during the day, and to use the stored heat which is given off to warm the house at night. In New Mexico, Steve Baer uses 91 200-litre (45-gallon) drums partially filled with water as the south wall of his house. During the day, sun shines on the drums and heats the water;

at night, the absorbed heat is given off. Other more complicated systems pump hot water in and out of storage tanks.

In Toronto, the Hooper-Hicks House, which cost \$250,000, can run for an entire year on its stored solar energy, Wardrop said. During the summer, water is heated and stored in a 60 degree C "swimming pool" in the basement. "The idea is good", he

said, but costs become prohibitive when you try to use more than 70 percent solar energy.

An even more ambitious project is Prince Edward Island's ark, a totally self-contained house which provides its own energy and food.

It uses a windmill as well as solar energy. Everything is recycled. The ark is "a bit futuristic, a bit impractical", he noted, but it's a

look at an alternative way of life. "If we go out into space, we'll have to recycle everything."

Hydro-Electric Power is "almost reaching a peak", Wardrop said after his speech. "You can only develop it so far."

### Anthro colloquium

The Anthropology Society of UNB, as part of their speaker series, is sponsoring an anthropology colloquium on Monday, the 14th of March in Carleton, Room 217 at 4:00 p.m. Guest speaker at this colloquium will be Lina Brock of Columbia University. She will be presenting a paper entitled, "The

Iwillimiden Confederation: Segmentary Society or Incipient State? In Search of a Theoretical Framework for Analysis of Relations of Dominance and Dependence in Tuareg Society". Lina, while a student at Columbia University from 1968 to 1973, studied under Marvin Harris

The Anthropology Society is certain that, with Lina Brock's recent return from fieldwork and the theoretical approach to her selected problem area, a lively and stimulating colloquium is likely. All students, faculty, and interested persons are cordially invited to attend

and Robert Murphy. In the fall of 1973, she left for Niger to begin 2½ years fieldwork with the Tuareg or "Bluemen". Her intent was to study the political history of the Tuareg, detailing the institution of Tuareg slavery. Her research keyed on the inter-relationship of vassals, slaves, and nobles as part of the historical development of the Iwillimiden Confederation. Lina Brock is now an Instructor, teaching at Rutgers University.

### Summer session at Grindstone

The 1977 summer session of the Grindstone School for Peace, Research, Education & Action will be held on Grindstone Island (50 miles SW of Ottawa) from July 31-August 19. The school offers students, teachers and activists an intensive course on major social justice issues with special emphasis on working toward solutions through academic research, public education and community organizing.

The island offers seven rustic buildings as accommodation, provides campfire sites, and volleyball courts, swimming and canoeing.

Participants will be limited to

thirty persons plus resource and staff people. The cost per participant is \$300 for room, board and tuition for three weeks. Limited scholarships are available.

Topics such as the Arab-Israeli Conflict, non-violent social change, sexism, Civil Conflict and Imperialism will be among those to be studied.

For more information and application forms, write Coordinator A, Grindstone School, 562 Johnson St., Kingston, Ontario, Canada, or phone (613) 549-4129.

Space is limited and inquiries should be made as soon as possible.

### IVCF annual meeting

The "business" part of the meeting will be followed by a slide presentation on the summer activities of IVCF in Atlantic Canada.

All members are strongly encouraged to attend this very important meeting.

Inter-Varsity Christian Fellowship will hold its annual business meeting tonight at 7:30 p.m. in the Tibbits Hall East Lounge. The major items of business include examining and approving the new

constitution as well as confirming the executive positions for the academic year 1977-78. The tentative slate of executive officers as approved by the nominating committee are as follows:

1. President - Lloyd Reid
2. Secretary - Cheryl Steeves
3. Treasurer - Sharon Austin
4. Literature Co-ordinator - Louise Hayes
5. Publicity Co-ordinator - Jack Watson
6. Special Projects Co-ordinator - Beth Jimmo

## NOTICE

Mr. Len Marchand

Minister of State for small business and first Canadian Native Indian to be appointed to the Federal Caucus will be in Fredericton Monday March 14, 1977, from 7:30 p.m. - 8:30 p.m. in Room 102 Tilley Hall to speak to students and the general public.

Mr. Marchand will speak on:

1. The Federal situation in Canada as it stands.
2. His role as minister of small business
3. The youth of our country.

Everyone is welcome and invited to attend.

Sponsored by  
The Young Student Liberals on Campus

### The Hilltop Pub

152 Prospect St. East,  
P.O. Box 905, Fredericton, N.B.  
E3B 5B8



March 11-12 (Friday-Saturday)

**"RED EYE"**

(5 piece group)

March 14-19 (Monday-Saturday)

**"TRIBE"**

(4 piece commercial rock group)

Hours: 8:00pm-11:30pm

Cover Charge Thursday-Saturday 7:00pm-10:30pm

No Cover Saturday Matinee 2:30pm-5:30pm

### Student matters decided without them

HALIFAX (CUP) — Nova Scotia Education Minister George Mitchell has refused to tell the Atlantic Federation of Students (AFS) the budgetary recommendations of the Maritime Provinces Higher Education Commission (MPHEC), even though the Association of Atlantic Universities received these recommendations in December.

Mitchell left a Feb. 26 meeting with AFS officials early to attend the Nova Scotia Liberal convention. Deputy Education Minister Carmen Moir refused to answer questions after the minister left, and told the students to submit their questions in writing.

Mitchell's reply, dated March 2, says that answers to questions about MPHEC "are not immediately available" because the Council of Maritime Premiers has not made a firm decision.

"Mitchell knows the answers to the MPHEC questions, he's known since at least December," said Brina Perkins, National Union of

Students (NUS) central committee member for Nova Scotia. "We found out at our meeting with Mitchell last Saturday that MPHEC was going to make the figures public but the government wouldn't let them. Mitchell also knows the regional Treasury Boards' recommendations. He just doesn't want the public to know."

AFS questions about the budgetary recommendations of the provincial Treasury Boards were also left unanswered, as was one asking whether all the tax points transferred from the federal government would be used for post-secondary education.

Diane Wright, the AFS representative for Mount St. Vincent University commented, "This is another example of what the government likes to refer to as 'student participation in the decision-making process'. First the government makes the decision and then they allow the students to participate."