

# the Print

Clackamas Community College

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## Student project involves College greenhouse

Thermal energy students at Clackamas Community College have been getting a chance to put their skills to the test lately through a project that involves improving the growth rate of plants in one of the College's greenhouses.

The project, which is expected to be completed the week before finals, entails the installation of solar panels that contain a refrigeration system. Jeff Marshall, thermal energy student and designer of the project, explained that when this refrigeration system goes through a phase change, it is much more efficient in absorbing heat than with other similar solar panel systems.

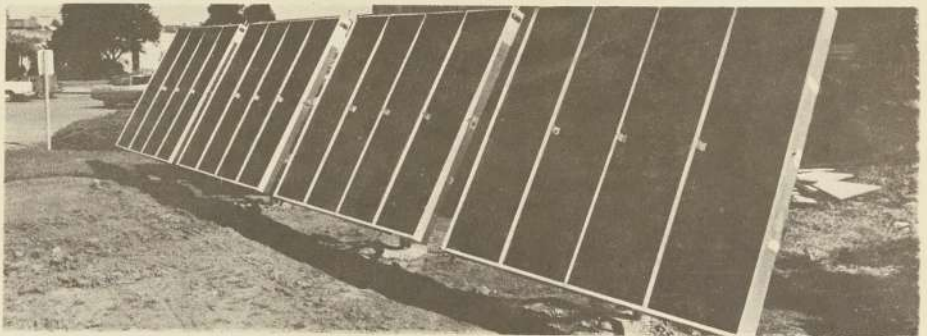
The heat that is absorbed will heat stored water, which in turn will be used to heat what is known as the root zone of the plants in the propagation beds. Marshall said it takes less energy to heat the

root zone only instead of the whole plant. The root zone will be kept at a relatively constant temperature of 80 degrees, which helps the plants to grow faster, and they will be watered automatically. Water will be transported from a storage tank to the greenhouse through underground pipes.

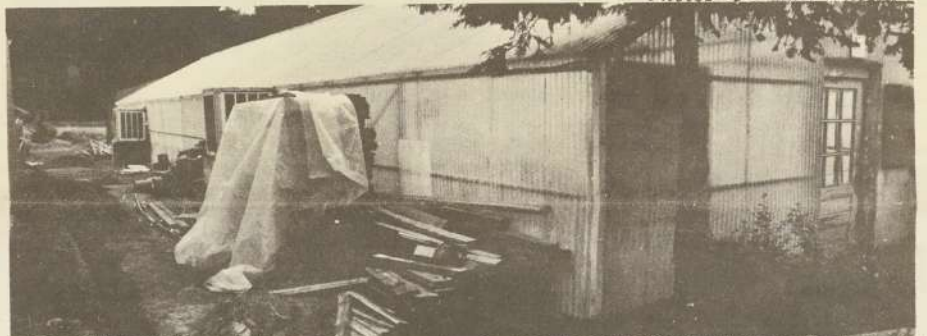
"It's a more efficient way of using energy to get good, efficient growth," Marshall said.

Randy Salisbury, a student who has also been involved in the project, said it has given thermal energy students an opportunity to sharpen their skills. "It has given these guys a real good chance at some hands-on (work)," he said.

The project is expected to cost around \$10,000 overall, and Salisbury said it will pay for itself in three to five years. He added the project will also serve a useful purpose to local farmers as a display of the system used.



Photos by Daniel Wheeler



**PROJECT PARTS**--Installation of solar panels (top) with refrigeration system will allow for more efficient energy use needed to raise plants in greenhouse (bottom). Water heated by energy will be piped underground to greenhouse (see ditch, bottom photo, left).

## Two-year classified contract offered in negotiations

By Shelley Ball  
Of The Print

The last meeting between representatives of Clackamas Community College's administration and classified personnel resulted in an offer of a two-year contract proposal to the classified personnel.

The meeting, which was held Monday, May 13, was one of a series that have taken

place between the two sides and was meant to hammer out an agreement on a classified contract for the 1985-86 school year.

Kevin Forney, co-president of the Clackamas Community College Association of Classified Employees (CC-CACE) and a member of the classified negotiating team said, "We're pretty much in agreement with the first year" of the two-year contract pro-

posal, but added there will need to be more discussion concerning the terms of the second year.

Both negotiating teams are scheduled to meet next week to continue the bargaining process. Overall, both sides have said the negotiations are going smoothly. In March, both sides exchanged contract proposals. Forney said that was the first time a direct exchange of proposals has happened. In

the past, only one contract proposal was submitted at a time, and a response to the proposal given before the other side could submit its proposal.

Another issue the negotiating teams will be discussing involves a layoff clause. Forney said the classified negotiating team is standing firm on their proposal to allow any classified members facing layoff to be able to bump less senior

employees in another department, rather than face unemployment.

The clause could only be exercised when classified members could stay inside their divisions, however. He added the administration is also standing firm against such a change in the current layoff clause. The current layoff clause does not allow such a crossover of classified positions in different College departments.

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