

# ***Transit Bus Shelter Solar Lighting Program***

## **Project Team**

***Archie Alexander - Chief of Power***

***Dale Cummings - Transit Planner***

***Paul Sorensen - Chief of Facilities***



In the late 1970's, Power and Facilities began installing fluorescent lighting in bus shelters throughout King County. At the time, it was the most economical and reliable method of lighting bus shelters available. After a number of years, re-lamping and repairing these light fixtures became expensive and time consuming. Something better was needed...



In the early 1990s, Power and Facilities began replacing bus shelter fluorescent light fixtures with vandal resistant “compact fluorescent” light fixtures. These have proven to be durable, reliable, and easier to maintain. They are also much more energy efficient than the fluorescent fixtures .

# Compact Fluorescent Fixture

The compact fluorescent fixture used in the majority of our shelters today. Although more reliable and efficient than its predecessor, it requires a conventional 115 volt AC electric source to operate. AC power is prohibitively expensive to install and not always available at many shelter locations.





The past several years Power and Facilities has been installing solar powered LED (light emitting diodes) light fixtures. This technology uses PV (photo voltaic) arrays mounted on the roof of the shelter which charge a battery pack during the daylight hours and then the batteries power the LED fixtures during the night. This technology is working very well and we are committed to its continued use in the future.

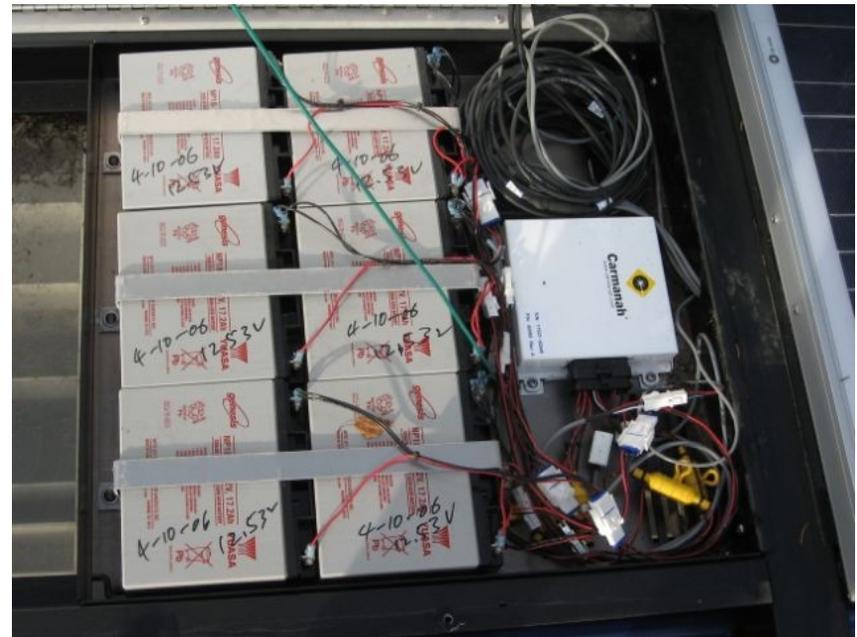




# Solar Power Light Fixture



# Solar Shelter Photo Voltaic Cells and Batteries



# Solar Shelters

- Renewable energy source
- Extremely efficient
- Can be installed virtually anywhere for a fraction of the cost of an electric shelter



In 2006, we installed 48 solar powered “I-Stops” which signal transit operators when a passenger is waiting at a zone. In 2007 we installed 22 additional units with more on the way.

Metro Transit is dedicated to promoting energy conservation and the use of renewable energy. The Solar Shelter Program will remain a high priority as a result. We look forward to working with our partners throughout King County in the continued development and implementation of new and exiting energy conservation programs in the future.