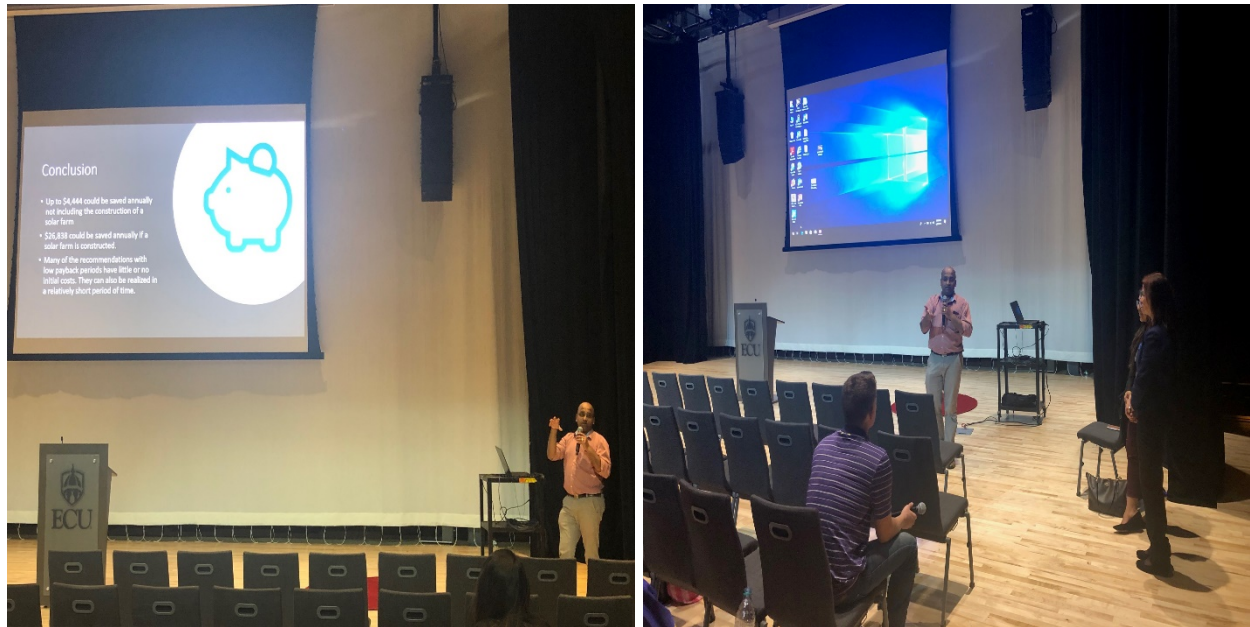


Towards a Sustainable Future: A study in the use of renewable energy for a nationally-renowned park



The use of renewable energy and renewable energy-assisted technology is vital for a sustainable future. ECU's Center for Sustainable Energy and Environmental Engineering (CSE3) assisted a nationally-renowned park in reducing electricity consumption through the use of renewable energy. CSE3 provided energy assessment recommendations which would help the park achieve financial savings. An on-site visit by CSE3's faculty and students highlighted multiple improvements that could be made to reduce the park's electricity consumption. These recommendations include the use of available solar energy as a method of energy production to reduce the park's annual cost due to electricity consumption. The park uses golf carts for transportation. Electricity used to charge the golf cart's battery for 8 hours a day was found to be 1,875 kW. This energy can be generated with the implementation of a Thin Film Solar Panel on the roof of the golf cart and can provide an annual savings of \$188. In addition to solar-powered golf carts, the implementation of a compact solar water heater provides another potential to conserve energy through solar powered technology. The annual energy consumption of the existing water heater was found to be 4640 kWh. With the implementation of a compact solar water heater, an annual savings of \$300 can be achieved.

Work done by CSE3 faculty and students at a nationally-renowned bird park was presented at ECU Research & Creativity Week's International Scholars Symposium.