LOL-HECO-IR-81

Ref: "The photovoltaic generation will not be dispatchable for the Koolau/Pukele area transmission line overload problem." (Exhibit 6, page 53)

Question(s):

If photovoltaic generation were connected at the subtransmission or distribution level, would it be dispatchable during Koolau/Pukele area transmission line overload conditions?

HECO Response:

Under the Hawaii Administrative Rules HAR-74-1, which are standards that apply to small power production and cogeneration, the term utility dispatch is defined as "the sole and absolute right of the electric utility, through supervisory equipment or otherwise, to control, from moment to moment, within the limits of sound engineering practices, the rate of delivery of energy, firm capacity and emergency capacity offered by a qualifying facility and accepted by the electric utility." Applying this definition to renewable energy, which HECO accepts on an as-available basis, "dispatchable" means having the ability to control the output of the generator(s) to allow for responsiveness to utility system conditions. A renewable source such as a photovoltaic generator without the use of energy storage technology is producing power only when the sun is shining and, therefore, is not a dispatchable source of power. HECO would be able to utilize the energy produced on an as-available basis to help mitigate some or all of the Koolau/Pukele transmission line overload (presuming that the energy was available at the time of the overload). However, HECO does not have control over external conditions such as inclement weather or when the sun goes down, which could result in zero output from the photovoltaic system during an overload situation on the Koolau/Pukele transmission lines. Therefore, photovoltaic generation would also not be dispatchable if it were connected to the sub-transmission or distribution system.