

"Current" Events



Lewis Electric Update



News for Lewis Electric Customers Vol. 1 No. 6 / March, 1998

El Nino and Power Demand

El Nino the Phenomenon!

By now everybody has heard about El Nino.

But What is El Nino ?

The Name El Nino meaning Christ Child, was given because it always occurred during the Christmas season.

Under normal conditions , the trade wind along the equator blows constantly from east to west (this is the trade wind that brought Columbus from Europe to America). This ceaseless wind pushes the warm surface ocean water to the west end of the Pacific Ocean, warm water piles up around Indonesia to form what is called a warm pool, which is warmer than the water in the eastern Pacific (near the coast of Peru) and is higher in elevation. This warm pool can trigger atmospheric convection and brings a lot of rain in that area. The higher elevation of the warm pool makes the water sink in the west Pacific, which, upon reaching the lower part of the ocean, flows eastward and resurfaces near Peru. This upwelling brings the colder and more

nutrient-rich bottom water to the ocean surface. Fish flourish and fishermen have a good catch.

When the equatorial trade wind weakens, the warm pool of water in the west Pacific loses its supply and cools off. The lack of bottom water upwelling coupled with the secondary atmospheric processes cause the warm pool to migrate towards the east. This is the time that fishermen and Scientists know that El Nino is coming. The temperature reversal between the west and the east causes the air pressure to change in tandem. This is when the atmospheric scientists see an abnormal Southern Oscillation (great change in pressure). The lack of a warm pool in the west results in less than normal rainfall in many areas. The people in Indonesia and northern Australia experience droughts and wild fires. The warm water that has migrated to the east causes excessive rain in the Peru area. The general circulation of the atmosphere is disrupted by the migration of the warm pool, bringing storms, droughts and abnormal temperatures to various parts of the world at unexpected times.

This why we have seen strong storms along the U. S. west coast,

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colder weather and even snow in the lower east coast regions.

This has a great impact on our power demands here in the United States and around the world.

While precipitation may affect power demand through storm related damages to power facilities, the major impact on power demand comes from changes in normal temperatures

Normal temperature forecasts all go out the window during an El Nino year. A much colder winter season, sometimes extending much further south than is normal and traditionally cold northern areas seeing milder than normal temperatures. These abnormalities will also effect our summer season. Since higher temperature in the summer months lead to more electrical demand and problems for us to keep up.

SLM

Update:

Dade County's Lighting Ordinance 96-171.

We have just completed our first servral lighting survey's with great success. Using our newly purchased state of the art equipment, we have done photometric studies for several new construction jobs and several parking lot lighting rehab jobs (for conformance to ordinance #96-171). All with outstanding results.

On one new construction job, we designed the lighting package using manufacturers supplied software showing the correct photometrics

needed for conformance to #96-171. This all looks good in theory, then came the test. Our customer was required by Building and Zoning Department to have an actual Photometric study. We took approximately 50 readings with our new light meter in all areas of the parking lot (on a Very cool night). We then made a drawing of the parking lot and inserted the lighting as built, then inserted the light measurements in the locations they were taken and the accuracy of the photometrics were astounding. Building and Zoning accepted the study for our lighting package meeting all the requirments of Ordinance #96-171. Our customer was very Happy and impressed.

We were impressed with all aspects of this challenge and are proud to say that we are probably one of a very few firms that can do this.

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