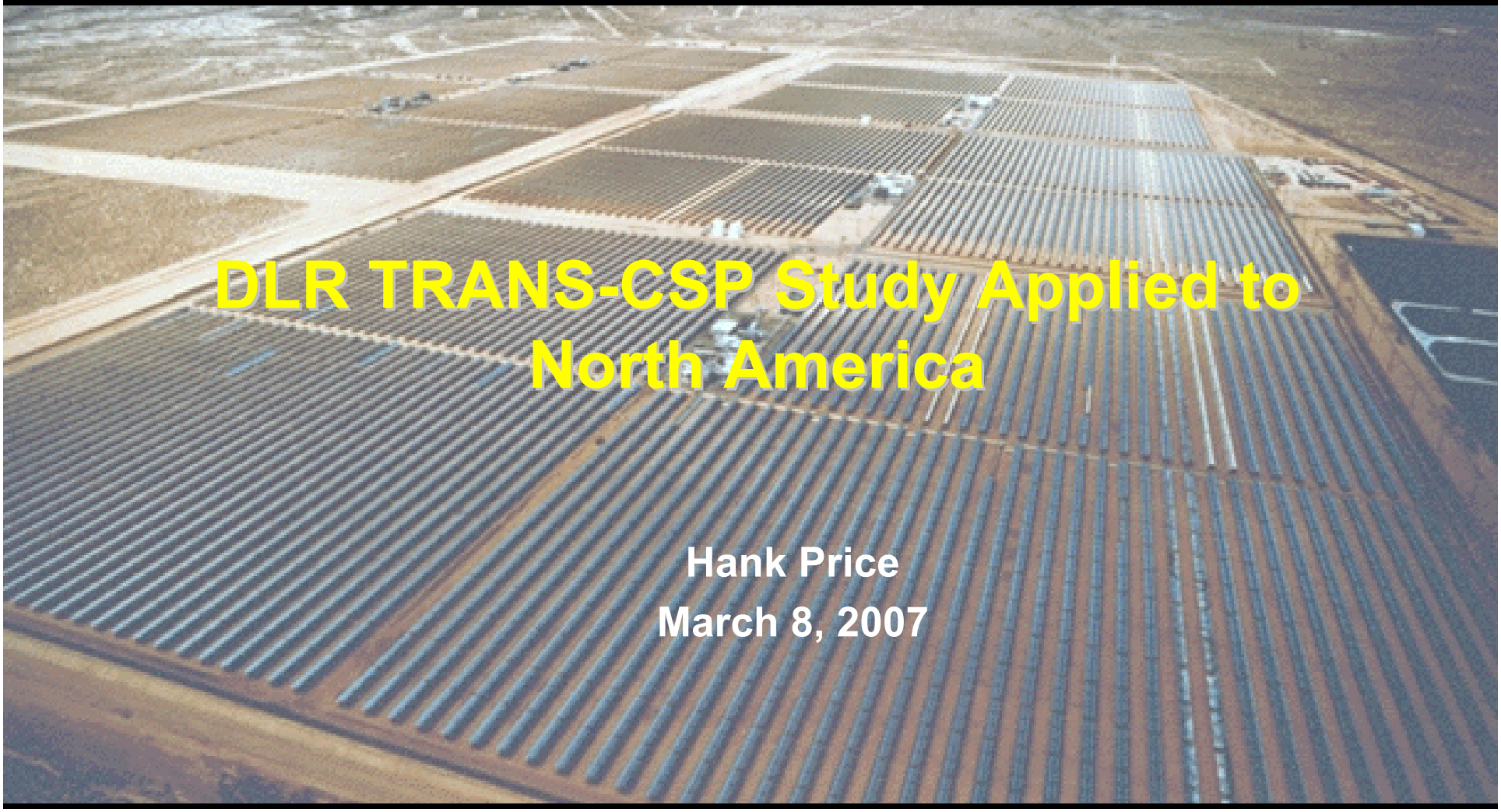
U.S. Department of Energy
Energy Efficiency and Renewable Energy



DLR TRANS-CSP Study Applied to North America

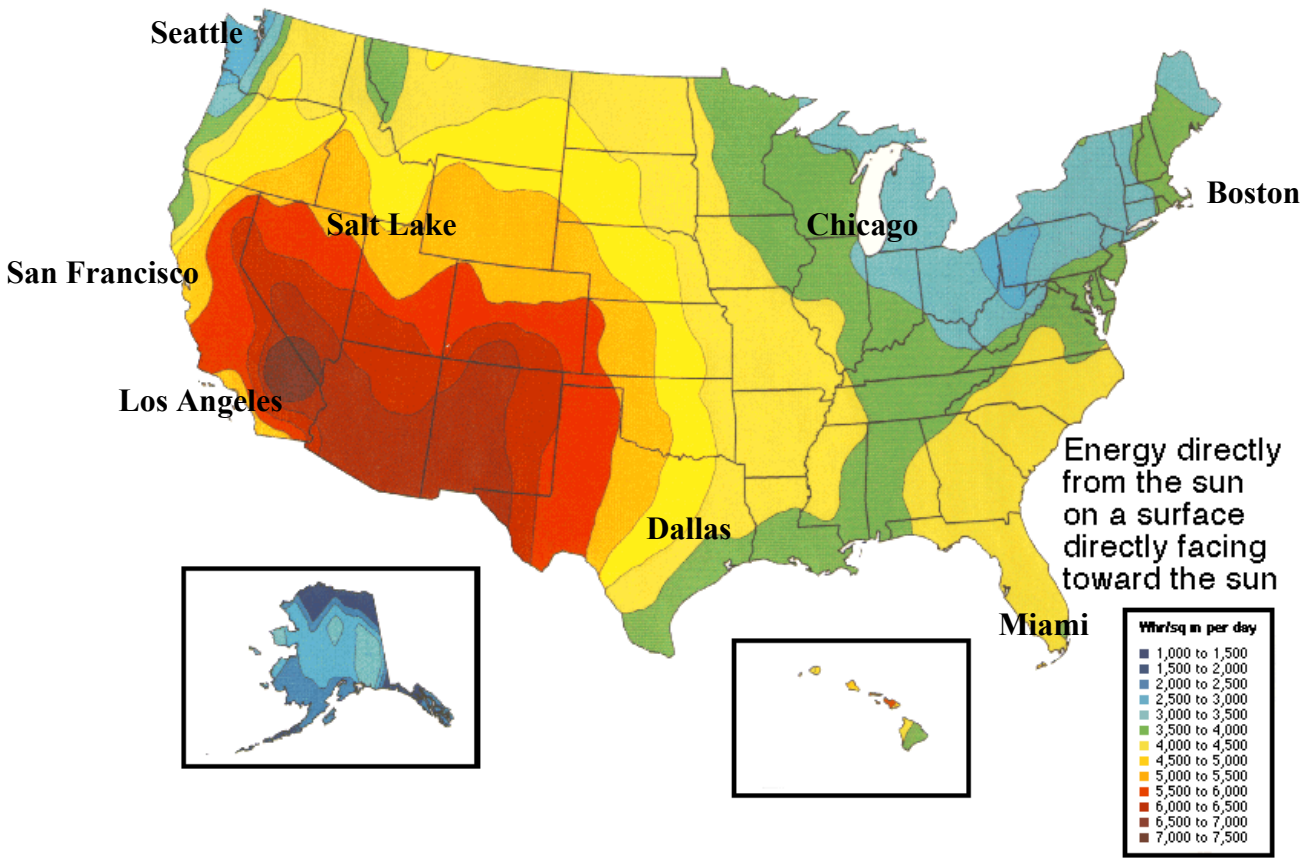
Hank Price

March 8, 2007

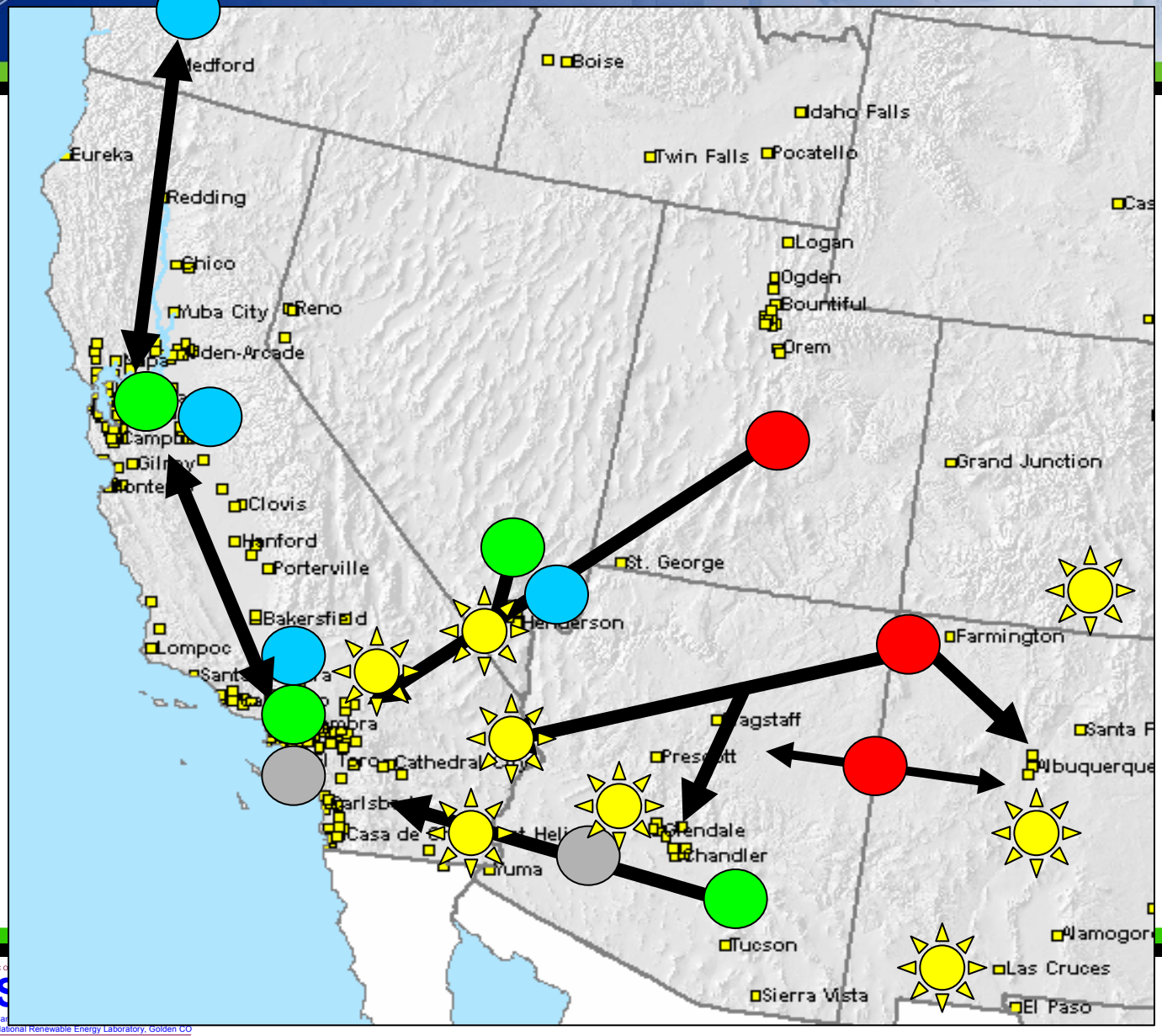
CONCENTRATING•SOLAR• POWER
Sun♦Lab
Sandia National Laboratories, Albuquerque, NM
National Renewable Energy Laboratory, Golden CO
Operated for the United States Department of Energy

Presented at the 2007 Parabolic Trough Technology Workshop held March 7-8, 2007 in Golden, Colorado.
NREL/PR-550-41422 March 2007

TRANS-CSP Applied to North America



Southwest Power Market Transmission Flows



Generation

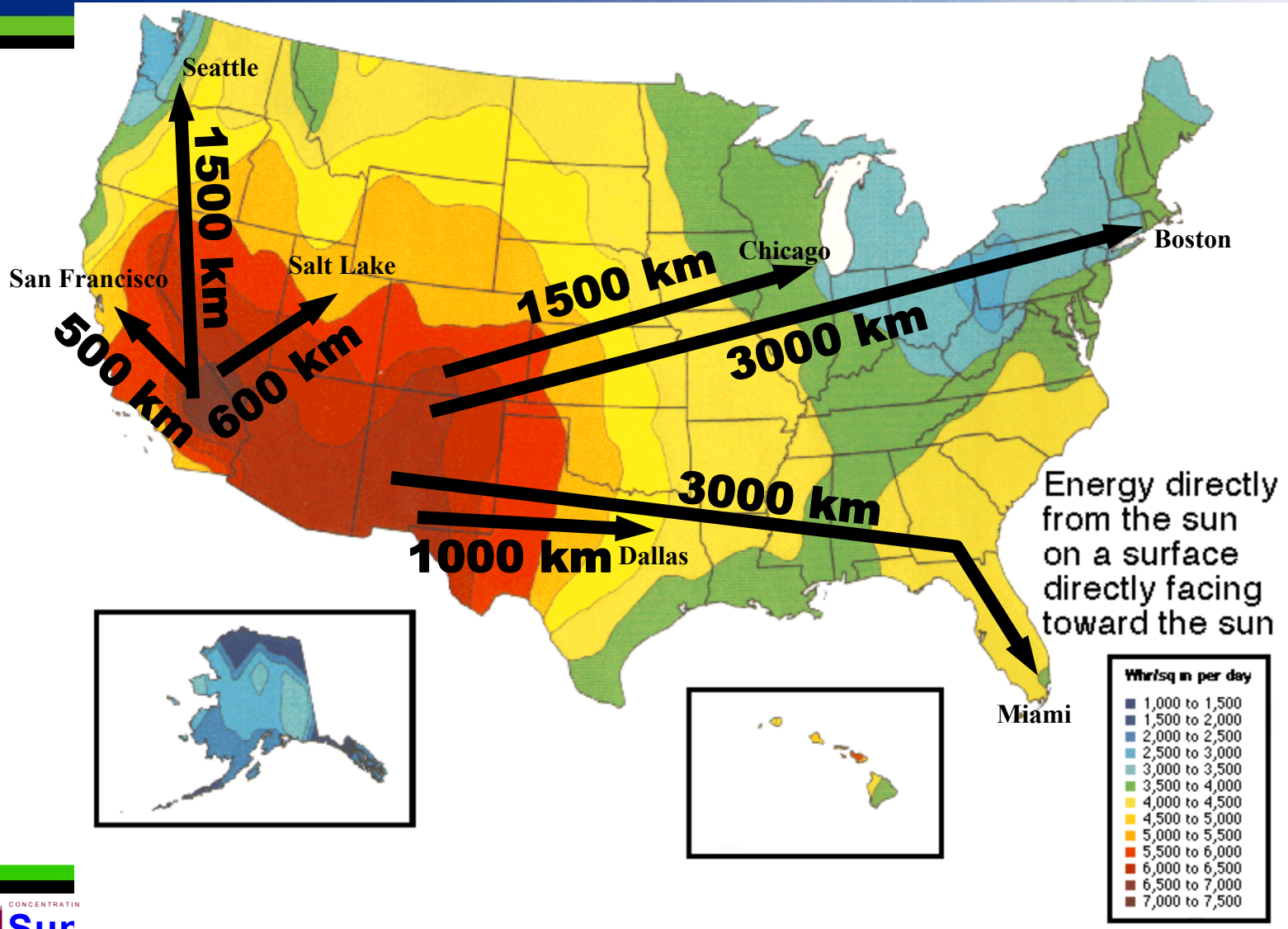
- Solar
- Hydro
- Coal
- Nuclear
- Gas

Transmission

Power Flows

Direction of Flow

Southwest Power Market Transmission Flows



TRANS-CSP Applied to North America

HVDC Transmission

- Can be used to transmit CSP power >3000km.
- Can reach all major population centers in North America from the Solar regions in the U.S. Southwest and Mexico.
- Will add 1.5¢/kWh or less to the cost of CSP.