



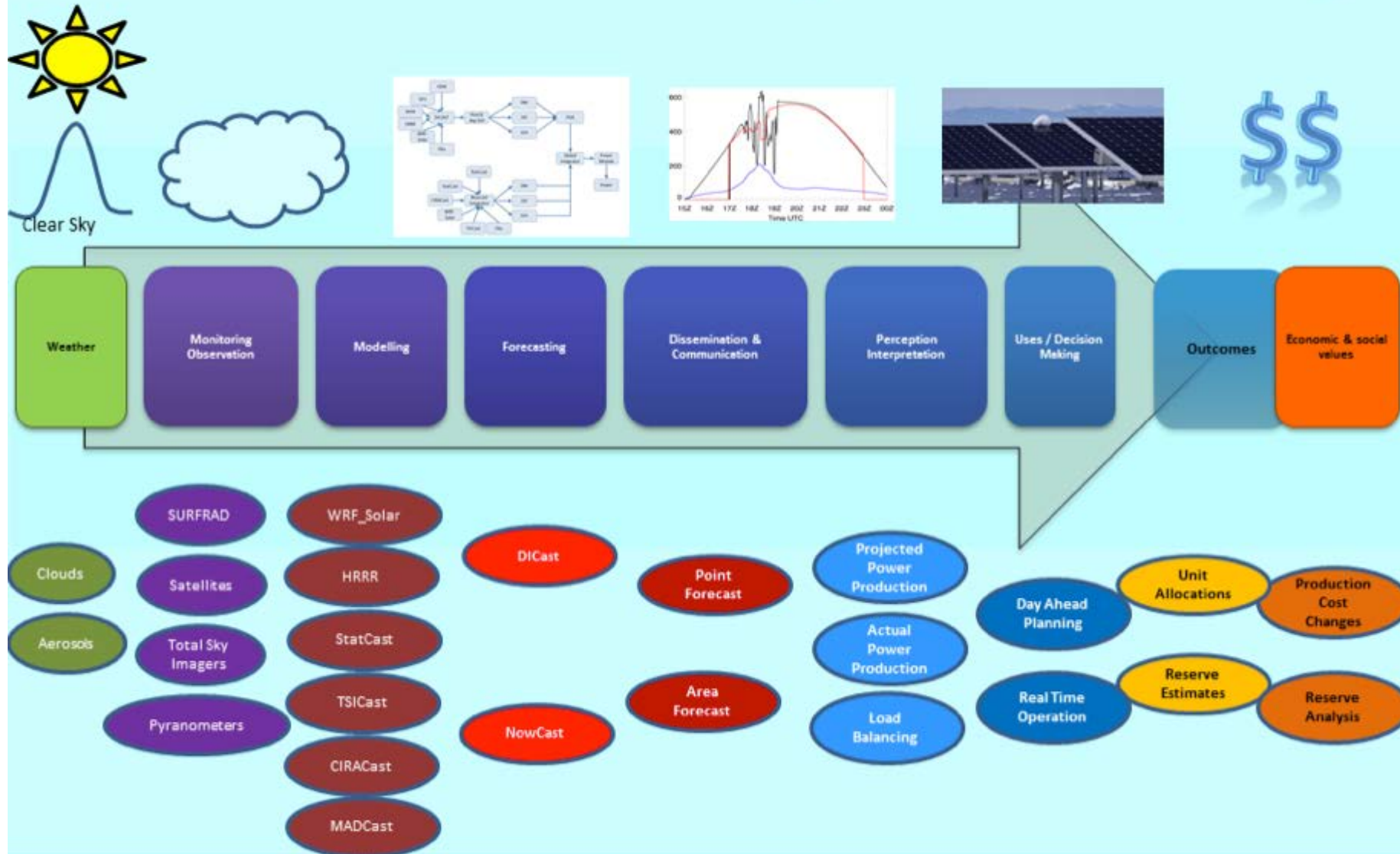
Monitoring and forecasting solar radiation

Nir Krakauer, Tarendra  
Lakhankar, Elaine  
Famutimi

CCNY

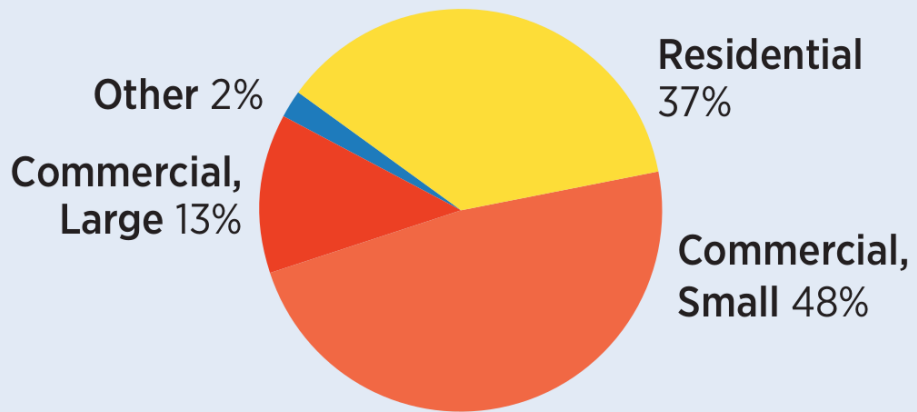
NRE  
L

# Value Chain: What is the value of solar power forecasting?

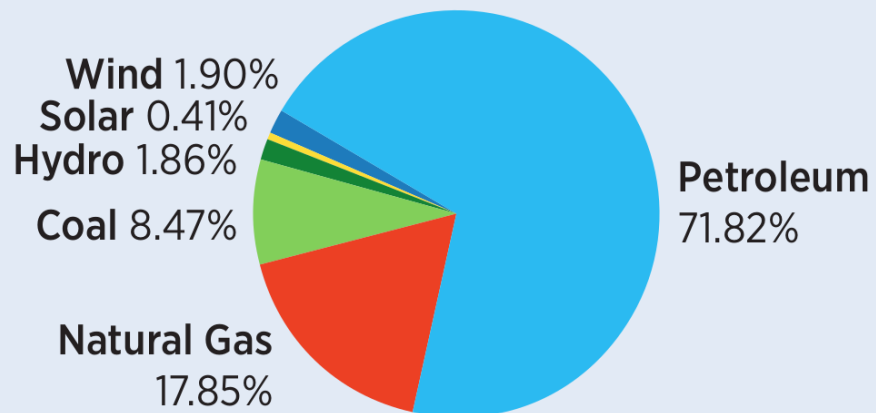


# Focus area: Puerto Rico

## Energy Consumption by Sector



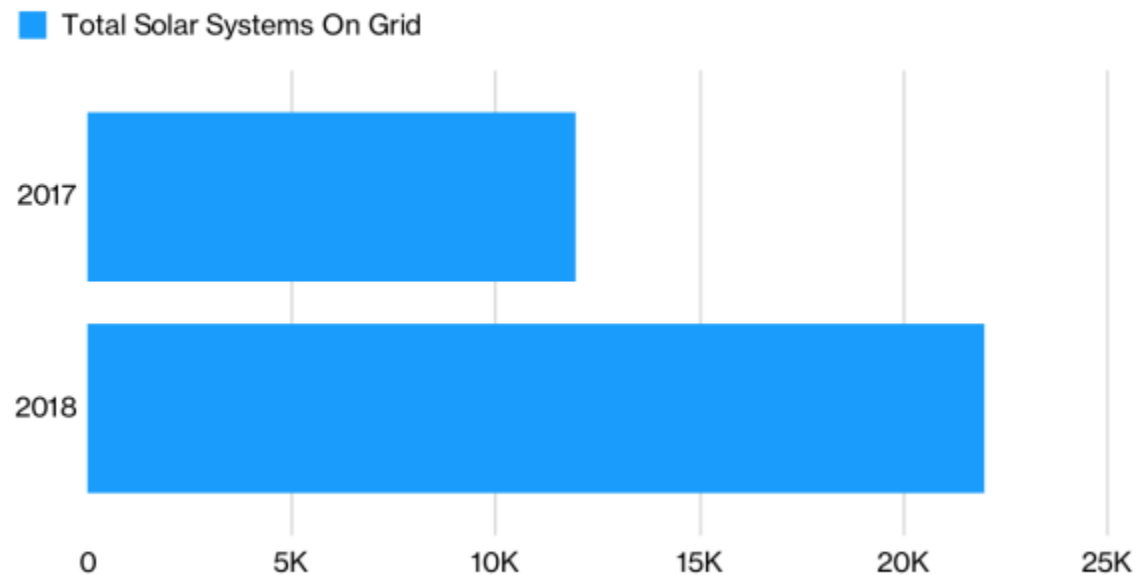
## Energy Generation Mix



NREL,  
2015

## Puerto Rico Rooftop Solar Systems Nearly Double

Residential solar system installations increase after Hurricane Maria

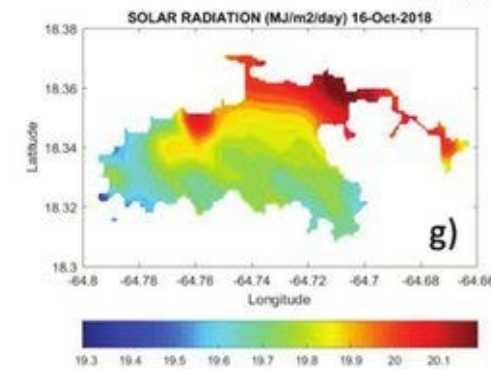
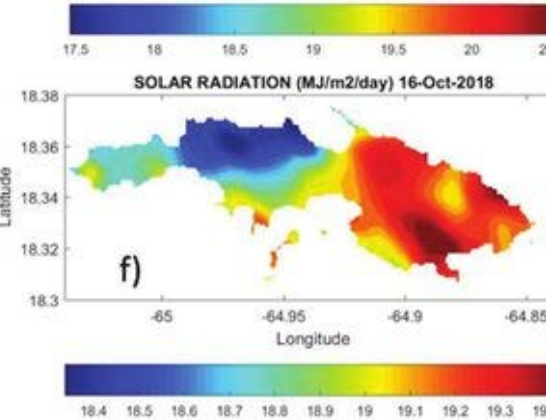
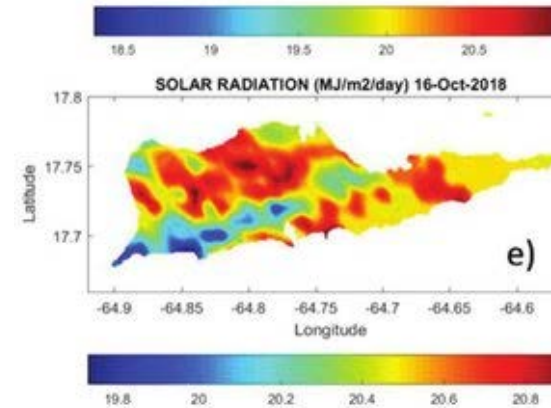
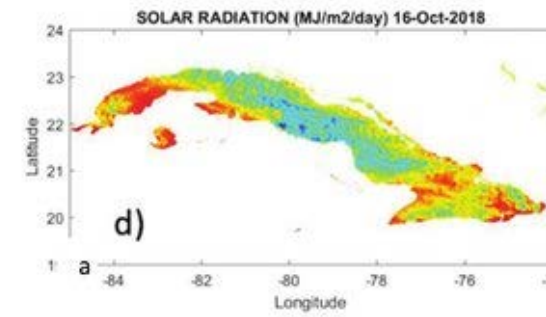
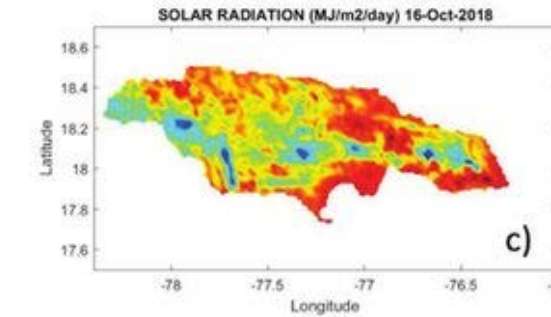
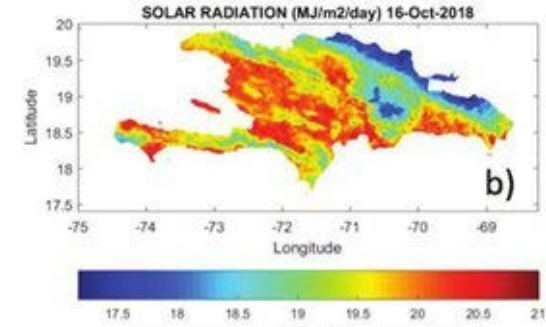
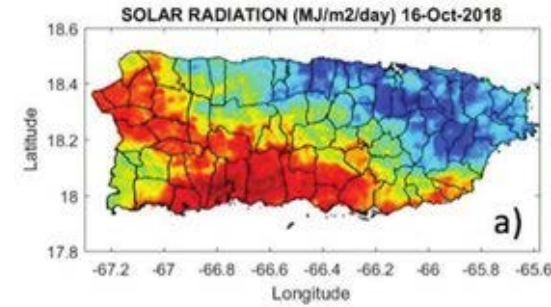


Source: Solar Energy & Storage Association of Puerto Rico **Bloomberg Environment**

201  
8

# Possible first steps:

- Correlate incoming sunlight measurements with different weather factors in region
- Compare surface observations with weather models and satellites.



Mecikalski and  
Harmsen 2019



# The student will learn:

- About variability in and factors affecting how much sunlight reaches the surface
- Data analysis with Octave/Python
- QGIS to create maps.
- Mendeley, a reference manager, to organize and save citations.
- Contribute to a research paper.



Thanks a lot

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