Louisiana Solar Industries: Lighting the Way to Sustainable Economic Development

presentation to:
2011 Louisiana Clean Energy Expo

by:
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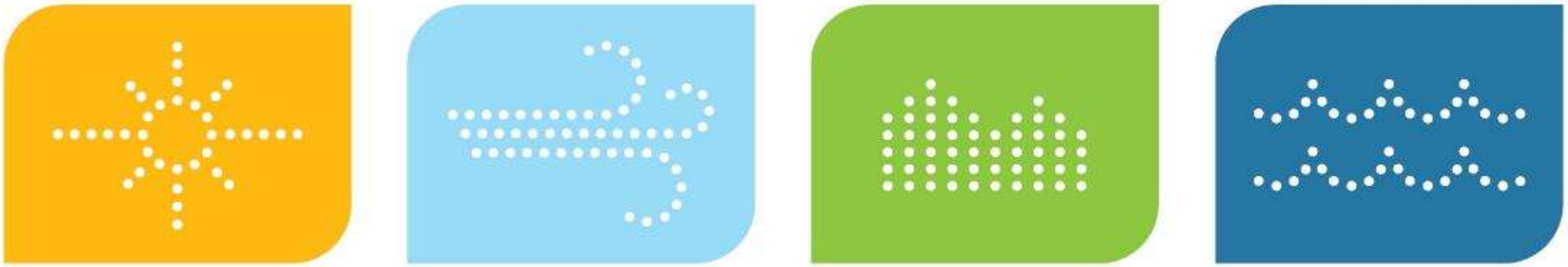
Secretary/Treasurer

Gulf States Renewable Energy Industries Association



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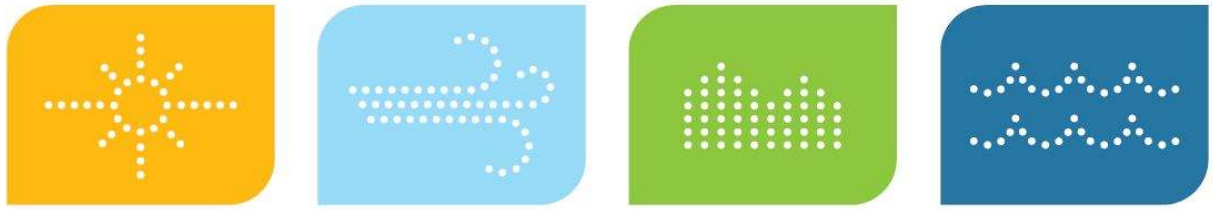
- Louisiana, Mississippi, Alabama
- Solar Energy Industries Association (SEIA)
- Solar, Hydrokinetic, Wind, Geothermal
- Trade Representation: Regulatory, Legislative, Arbitration, Self-Policing
- Solar prominent in Louisiana



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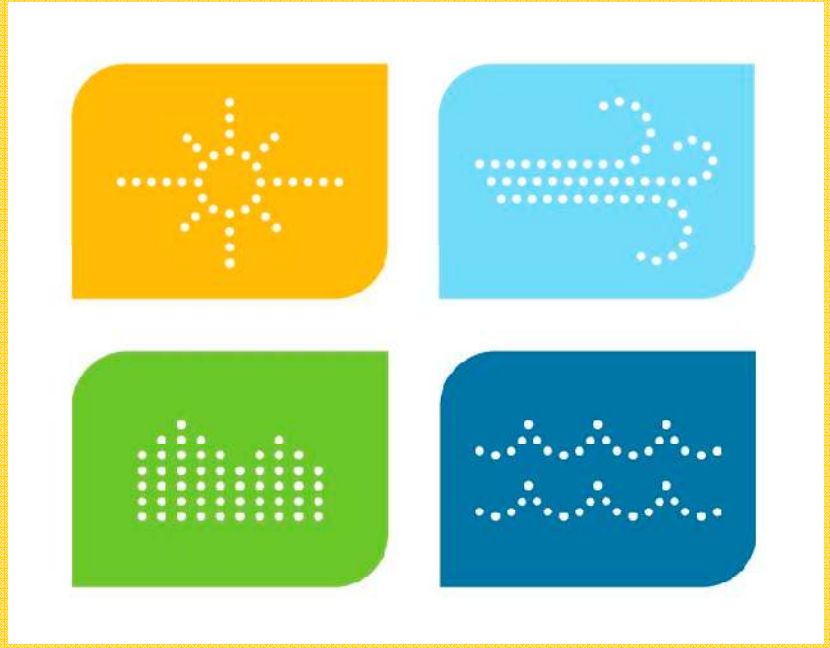
Resources, Capacity, Industry, Jobs

- **Solar Resource**: Power Potential
- **Installed Capacity**: Today's systems
- **Economic Impacts**: Savings and Jobs
- **Ramp-up Potential**: Solidifying Gains

Louisiana Solar Resource



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Solar Resource

- **Raw Solar Power**: 5 kWh per square meter
- Higher than many other areas with more interest and policy support:
  - Germany 3.0 kWh/m^2
  - New Jersey 4.5 kWh/m^2
  - Pennsylvania 4.3 kWh/m^2
  - Ontario 4.1 kWh/m^2

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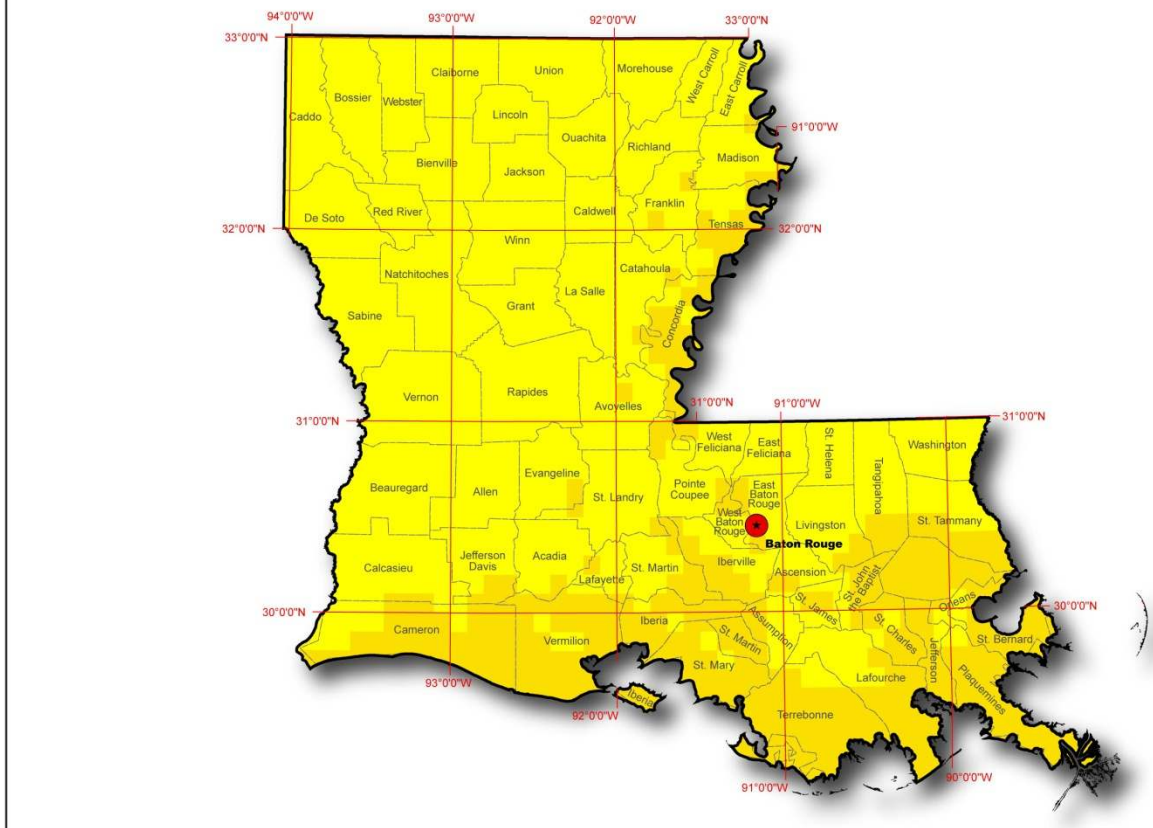
Global Solar Radiation at Latitude Tilt - Annual

Louisiana



Model estimates of monthly average daily total radiation, averaged from hourly estimates of direct normal irradiance over 8 years (1998-2005). The model inputs are hourly visible irradiance from the GOES geostationary satellites, and monthly average aerosol optical depth, precipitable water vapor, and ozone sampled at a 10km resolution.

kWh/m²/Day

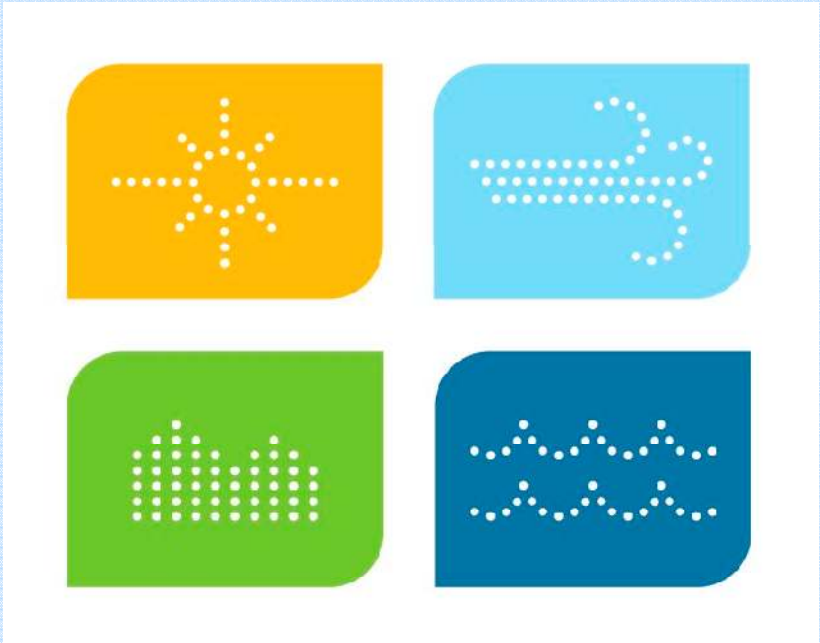
> 9 | 8.5 - 9.0 | 8.0 - 8.5 | 7.5 - 8.0 | 7.0 - 7.5 | 6.5 - 7.0 | 6.0 - 6.5 | 5.5 - 6.0 | 5.0 - 5.5 | 4.5 - 5.0 | 4.0 - 4.5 | 3.5 - 4.0 | 3.0 - 3.5 | 2.5 - 3.0 | 2.0 - 2.5 | < 2

Miles
0 20 40 80

This map was produced by the National Renewable Energy Laboratory for the U.S. Department of Energy. September 25, 2007

NREL

Louisiana Installed Capacity



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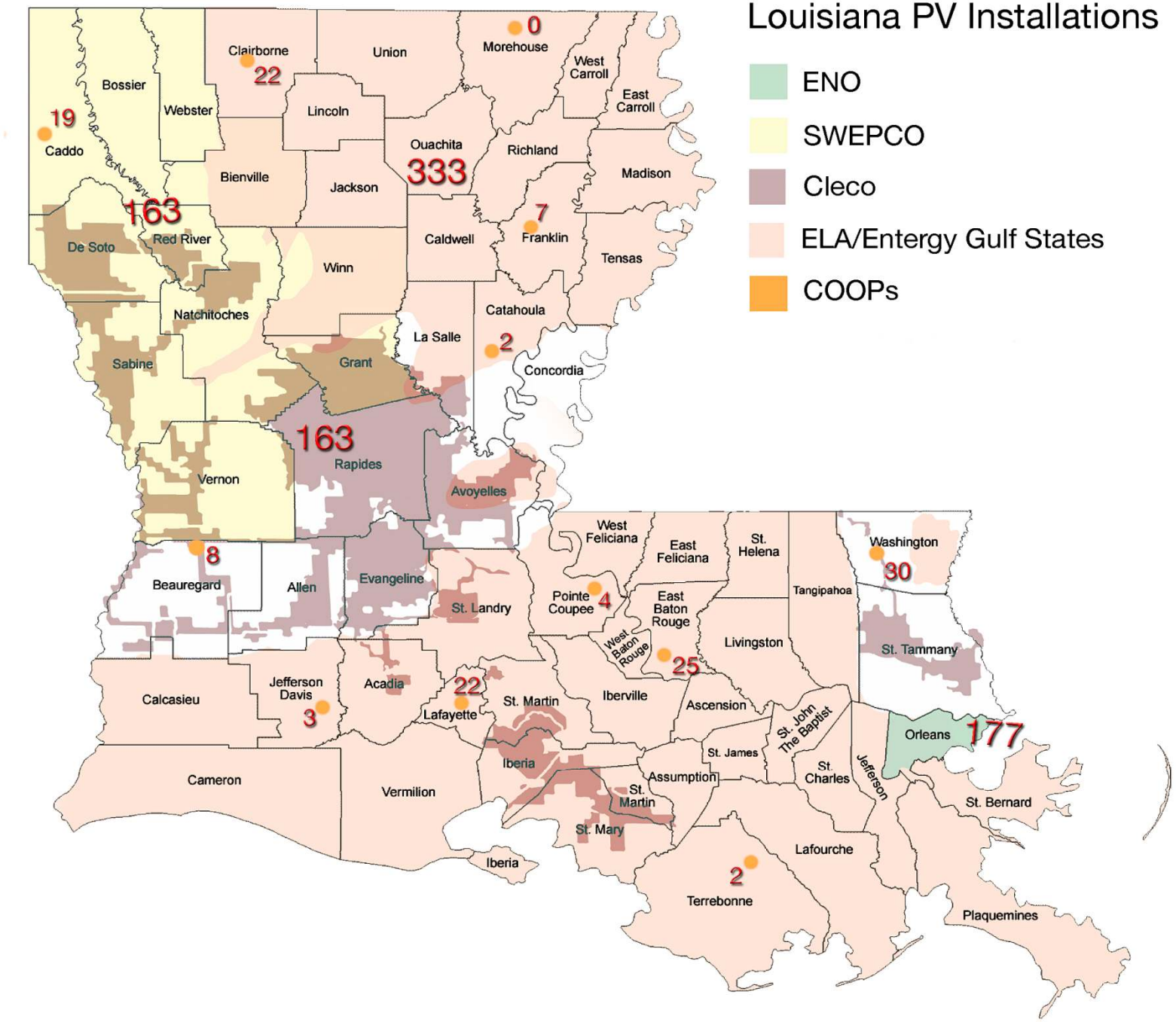
Utility Reported PV Installations & Corresponding kW

Utility Type	PV Installations	kW*
COOP	144	394.01
IOUS	836	1,445.8
Municipal Electric	62	N/A
TOTAL	1,042	1,839.81

* Missing kW information for three COOPS and Entergy Louisiana, Entergy Gulf States, & Cleco


Louisiana PV Installations
ENO
SWEPCO
Cleco
ELA/Entergy Gulf States
COOPs
Bossier
Webster
Clairborne
22
Union
Morehouse
0
West Carroll
East Carroll
19
Caddo
Lincoln
Ouachita
333
Richland
Madison
Bienville
Jackson
163
De Soto
Red River
Caldwell
Franklin
7
Tensas
Winn
Natchitoches
Catahoula
La Salle
2
Sabine
Grant
Concordia
163
Rapides
Vernon
Avoyelles
West Feliciana
East Feliciana
St. Helena
Washington
30
8
Beauregard
Allen
Evangeline
St. Landry
Pointe Coupee
4
East Baton Rouge
Tangipahoa
West Baton Rouge
Livingston
25
St. Tammany
Jefferson Davis
3
Acadia
22
Lafayette
St. Martin
Iberville
Ascension
Calcasieu
Orleans
177
St. John The Baptist
St. James
Iberia
Assumption
St. Charles
Jefferson
Cameron
Vermilion
St. Martin
St. Bernard
St. Mary
Lafourche
Iberia
2
Terrebonne
Plaquemines

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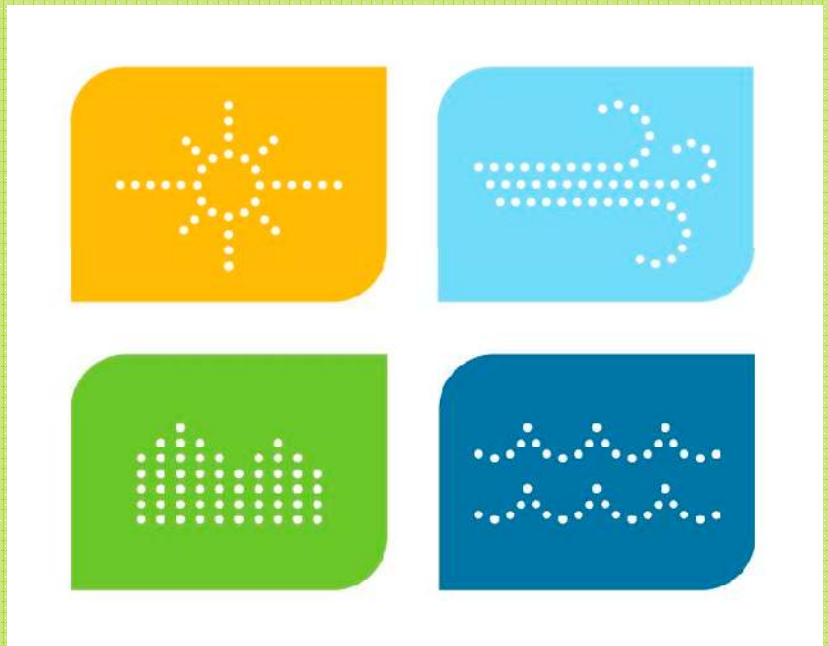
Estimated Capacity Solar PV

- 1042 Grid-Tied Solar PV systems reported to date
- Power ratings provided for 484 of reported systems, averaging 3.8 kW
- Estimated total solar installed capacity in Louisiana between 3.7 and 4.3 MW

- In early 2007, estimated LA capacity less than 20kW

Economic Impacts



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Installed Value and Federal Funds

- Total value of installed residential solar installations in LA is $33,554,228 *(LDR)*
- 30% Federal Tax Credit for solar applies to majority of these systems
- Indicates over $9M in related Federal funds injected into Louisiana economy

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Owner Energy Cost Savings

- Annual utility savings of 3.8kW PV: $600
- 30-year escalated savings: $33,651
- Lifetime savings of all La PV systems: $35.1M
- Lifetime savings of Thermal systems: $4.8M
- Total savings: $39.9M

- Energy Savings ROI for Solar Credit: 138%

- **Direct economic impact**: Post-tax disposable income

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Employment Estimates

- 1,042 PV and 3.9MW = 914 New Jobs (JEDI)
- 120+ Statewide Licensed Solar Energy Contractors (LSLBC)
- Informal Industry Survey Indicates Average of 6 Full-time Employees, up to 35 (GSREIA)

Jobs and Economic Development Impact: See www.nrel.gov/analysis/jedi for more information
Louisiana State Licensing Board for Contractors, http://www.lslbc.louisiana.gov

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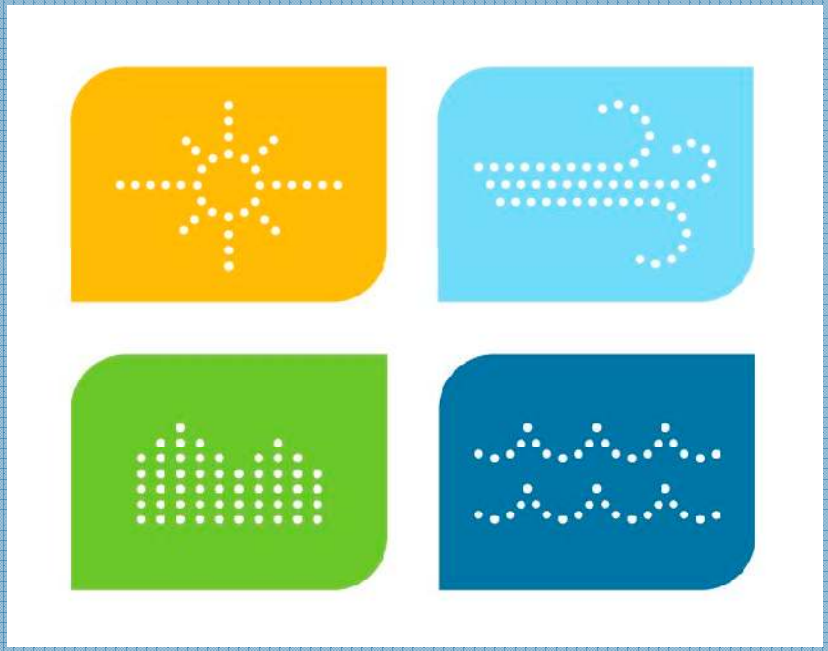
Job Categories

- **Direct**:
  - **Skilled**: electricians, plumbers, roofers, laborers
  - **Professional**: designers, engineers
  - **Office**: clerical, accounting, management

- **Indirect**:
  - Engineers, architects, attorneys
  - Warehouse/supply, domestic manufacturing

Scale Up Opportunities and Benefits



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Renewable Energy Implementation Plan

- Public Service Commission Docket
- RFP for 350MW of Utility-Scale Renewable Energy
- 2012-2014 Performance Timeline
- Could Dramatically Boost Installed RE Capacity

- Question: What are the potential economic benefits of expanding to 10, 50, and 100 MW of solar PV in Louisiana?

(LA PSC Docket No. R-28271 Subdocket B)

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Projected Employment Impacts

Job Creation with Expanded Solar Capacity

- 10 MW: 2,307
- 50 MW: 11,535
- 100 MW: 23,071

Total estimated jobs during construction and installation period

Source: JEDI/NREL

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Louisiana Renewable Energy

– Strong natural resources
– Favorable markets and costs
– Growing industry with regional potential
– Sustainable high-skill jobs
– Positioning for future international demand

Questions/Comments