

Progress Florida Nuclear Power Plant Site Selection



New Nuclear Baseload Generation Addition

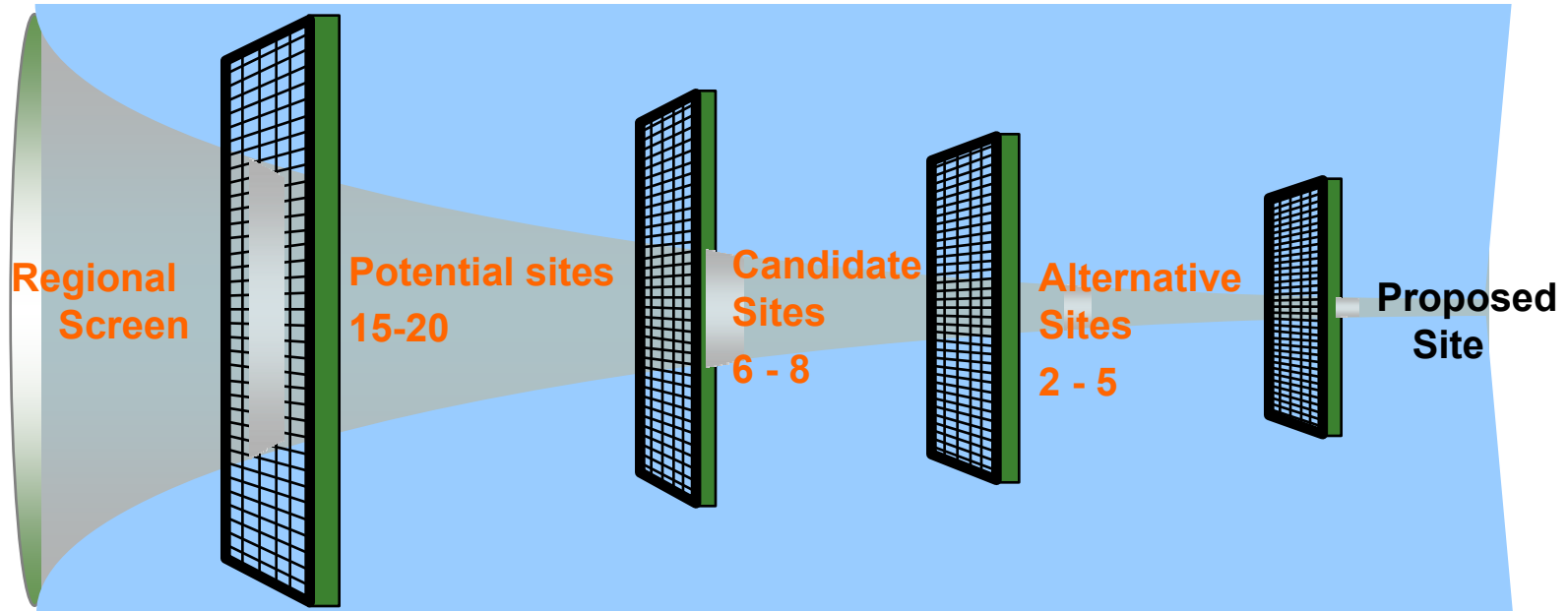


ENERCON Services, Inc.

Siting Objectives

- Select a nuclear power plant site that satisfies:
 - Applicant's business plans and objectives
 - COLA for new nuclear power plant in Florida
 - Regulated plant
 - NRC site suitability requirements
 - NEPA requirements for the consideration of alternative sites

Site Screening



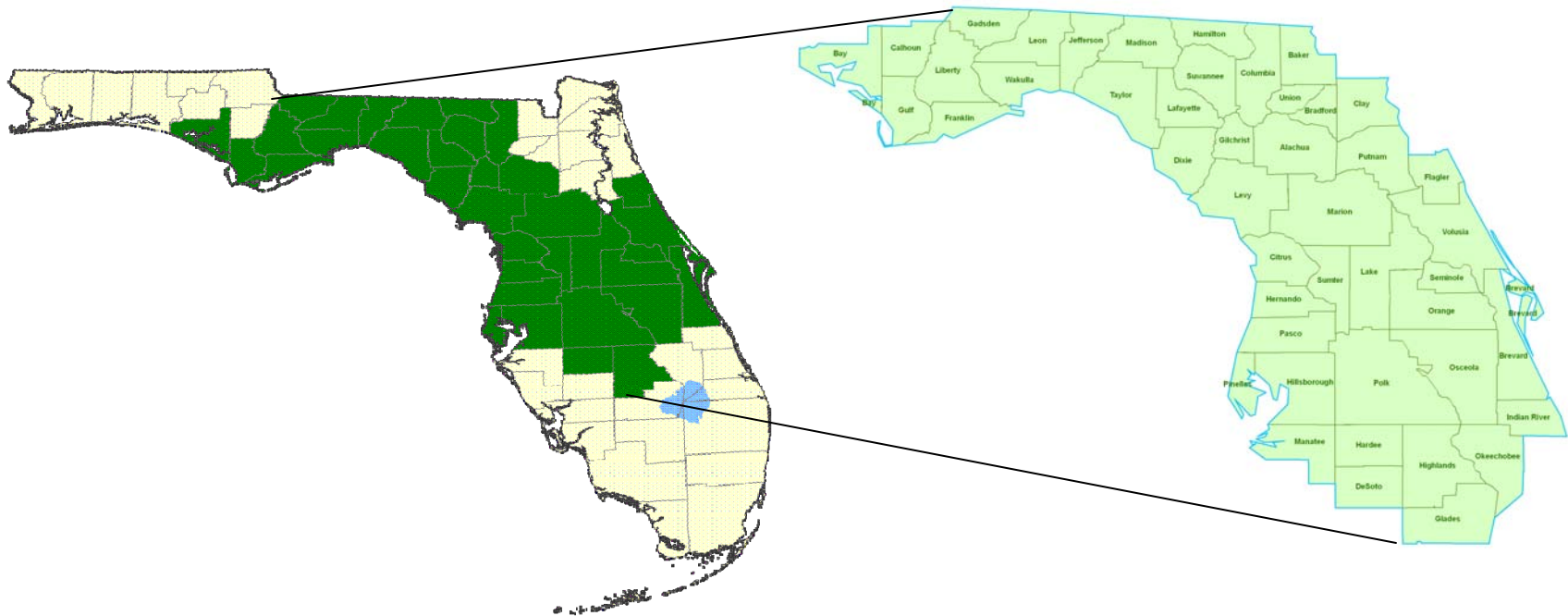
Process:

Developed from EPRI *Siting Guide: Site Selection and Evaluation Criteria for an Early Site Permit Application* (Siting Guide), March 2002

Region of Interest

Progress Service Territory

ROI = Service Territory +
One county band



Regional Screening

Data Category	Mapped Data	Screening Criteria (Areas excluded)
Population	Population Density	Census blocks where population density > 300 persons/mi ²
Water Availability	Water sources (large rivers, coastal areas)	Areas > Five mile band around source. River reaches for which the average flow <10 times the plant makeup water requirement
Dedicated Land Use	Federal & State parks, monuments, wildlife areas, wilderness areas, wild and scenic rivers	Five mile buffer around each mapped feature
Regional Ecological Features	Known, mapped wetlands, estuaries, designated T&E species habitat	Areal extent of identified features

Identify Potential Sites

Process

- Scan Region of Interest using Google Earth® satellite imagery
- Identify potential sites of nominally 6000 acres
- Confirm/adjust locations using additional data sources
 - Higher resolution USGS aerial photographs
 - USGS topographic maps
 - State and county highway maps

Objectives

- Identify as many viable potential sites as practical
- Diversity in potential site locations to allow evaluation of major siting tradeoffs

Identify Potential Sites

Considerations

- Major water sources
- Proximity to transmission/load centers
- Avoidance of high population areas & towns
- Consideration of ecologically sensitive and special designation areas
- Proximity to transportation (e.g., rail lines, barge terminals)
- Environmental wetland impact
- Minimal number of land parcels

Selection of Candidate Sites (= 8)

Final List of Candidate Sites

Taylor	Crystal River
Levy 2	Dixie
Levy 3	Putnam 3
Lafayette	Highlands

General Siting Criteria

Siting Criteria	Siting Criteria
Health and Safety Criteria: Accident Cause-Related Criteria	Environmental Criteria: Operational-Related Effects on Aquatic Ecology, cont'd.
Geology and Seismology	Entrainment/Impingement effects
Cooling System Requirements: Cooling Water Supply	Dredging/Disposal Effects
Cooling Water System: Ambient Temperature Requirements	Environmental Criteria: Operational-Related Effects on Terrestrial Ecology
Flooding	Drift Effects on Surrounding Areas
Nearby Hazardous Land Uses	Socioeconomic Criteria
Health and Safety Criteria: Accident Effects-Related	Socioeconomic – Construction Related Effects
Extreme Weather Conditions	Socioeconomics – Operation
Population	Environmental Justice
Emergency Planning	Land Use
Atmospheric Dispersion	Engineering and Cost Related Criteria: Health and Safety Related Criteria
Health and Safety Criteria: Operational Effects-Related	Water Supply
Surface Water- Radionuclide Pathway	Pumping Distance
Groundwater Radionuclide Pathway	Flooding
Air Radionuclide Pathway	Civil Works
Air-Food ingestion pathway	Brownfield Site Remediation (if applicable)
Surface Water – food radionuclide pathway	Water Supply
Transportation Safety	Engineering and Cost: Transportation or Transmission Related Criteria
Environmental Criteria: Construction-Related Effects on Aquatic Ecology	Railroad Access
Disruption of Important Species/Habitats	Highway Access
Bottom Sediment Disruption Effects	Barge Access
Environmental Criteria: Construction-Related Effects on Terrestrial	Transmission Cost and Market Price Differentials
Disruption of Important Species/Habitats and Wetlands	Engineering and Cost- Related Criteria: Related to Socioeconomic & Land Use
Dewatering Effects on Adjacent Wetlands	Topography
Environmental Criteria: Operational-Related Effects on Aquatic Ecology	Land Rights
Thermal Discharge Effects	Labor Rates

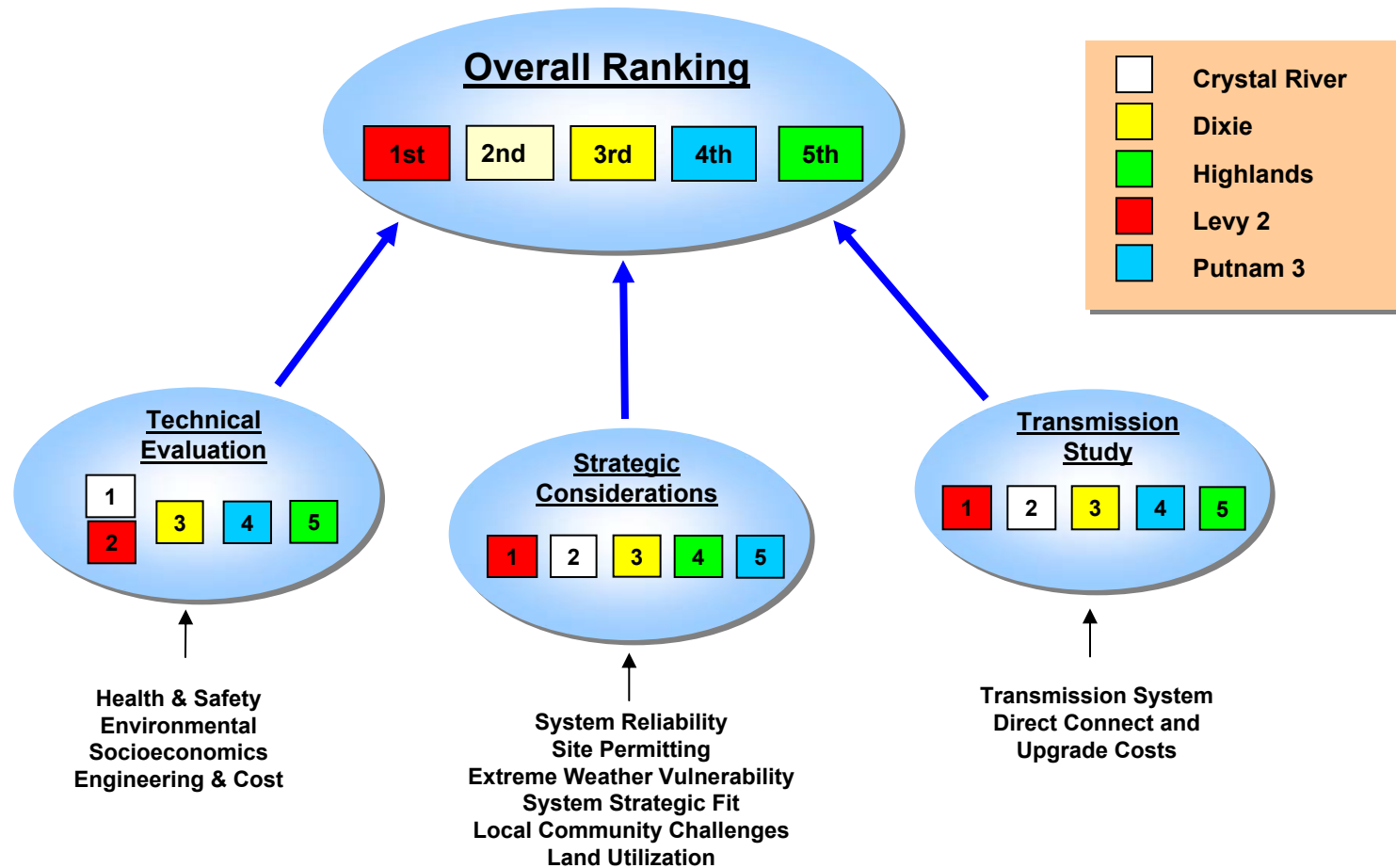
Selection of Alternate Sites (=5)

- Crystal River
- Dixie
- Levy 2
- Putnam 3
- Highlands

Alternate Site Evaluation

- Technical Evaluation
 - Screening from ROI to Alternative Sites
 - Scoring Alternative Sites
- Strategic Considerations
 - Validating Alternative Sites
 - Business Strategy
- Transmission Study
 - System Reliability and Cost Impact

Composite Summary Results



Proposed Site - Levy

- Transmission costs as low as any of the sites under consideration,
- Significant reliability advantages over Crystal River (storm surge flooding + single weather event outages),
- Adequate geotechnical conditions,
- Ecological conditions similar to other alternative sites, and,
- Adequate water supply (Gulf of Mexico through Florida Barge Canal), without impacting riverine surface water resources.