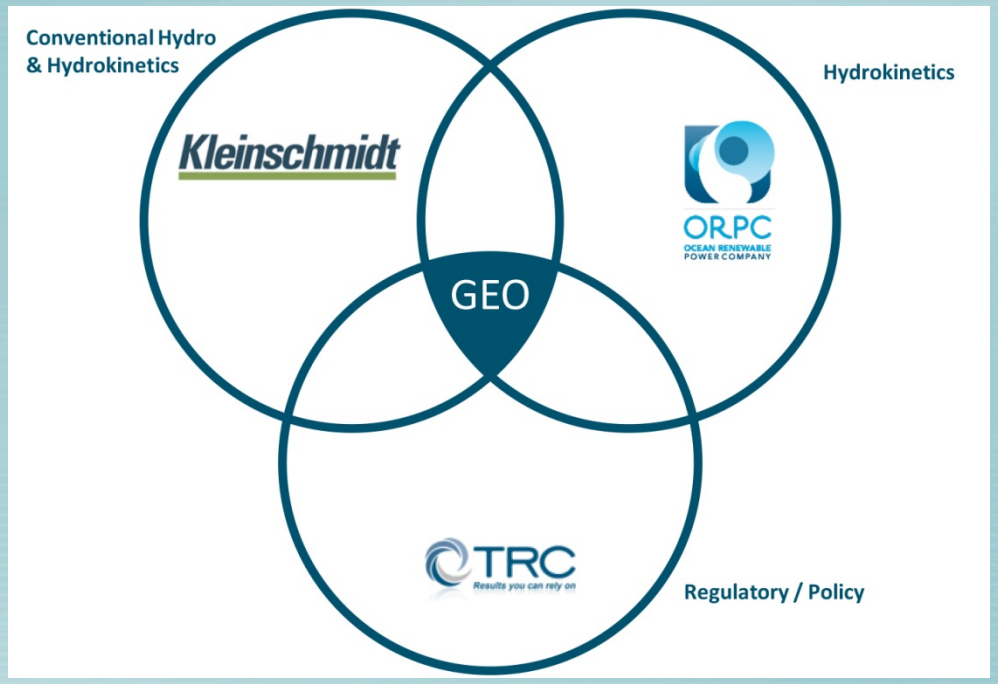
Maine Hydropower Study



Study Goals

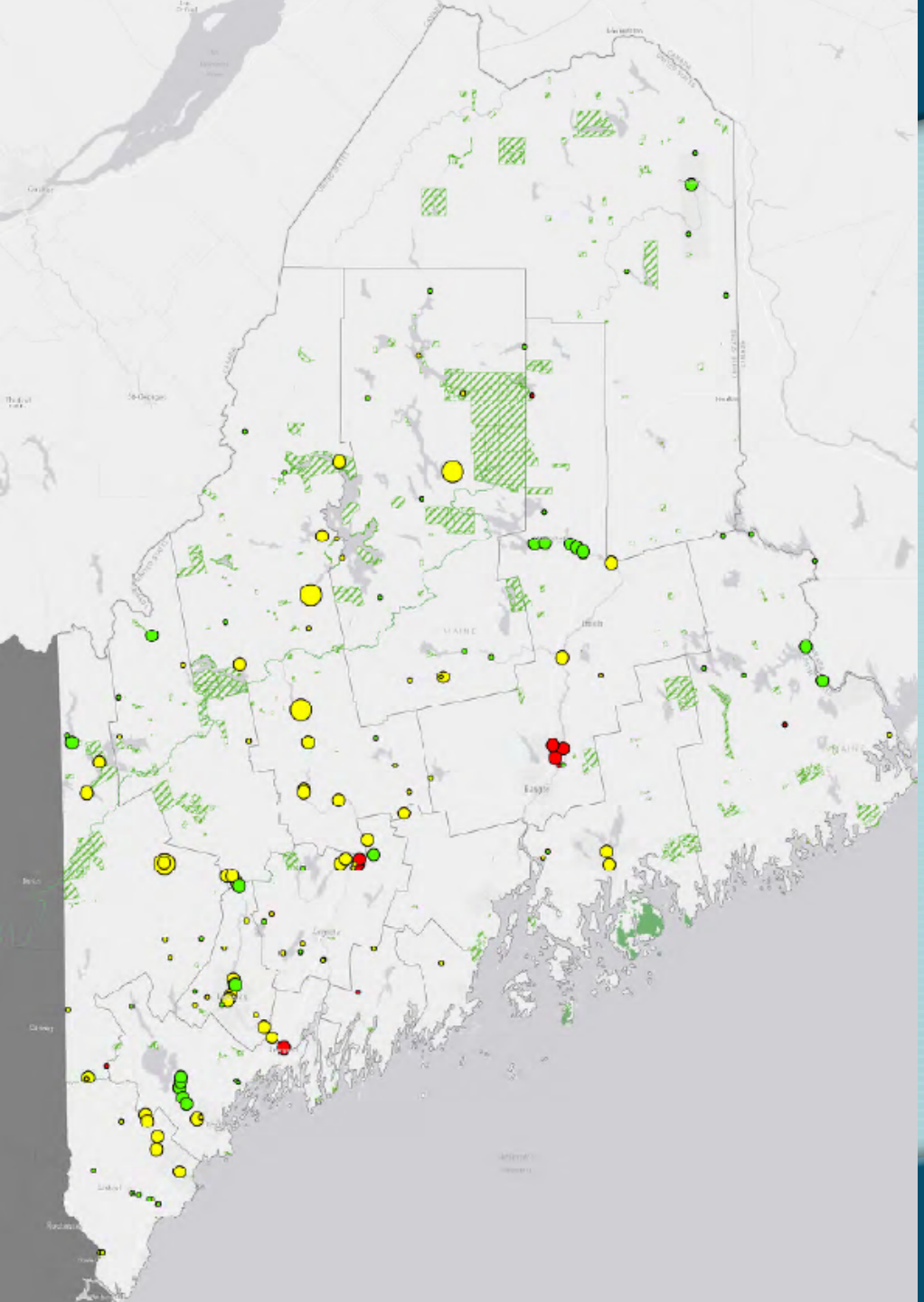
- Resource Inventory
- Review of Regulatory Environment

Resource Inventory

- Conventional Hydropower
- Hydrokinetic

Conventional Hydropower

- Reviewed Powered and Unpowered Dams
- Phased Screening Approach
  - Started with 891 dams
  - Each iteration removed sites
  - Identified 110 sites with 193 MW capacity
    - Applying regulatory screening
    - 45 sites with 55 MW capacity



Location of Potential Hydropower

Kleinschmidt

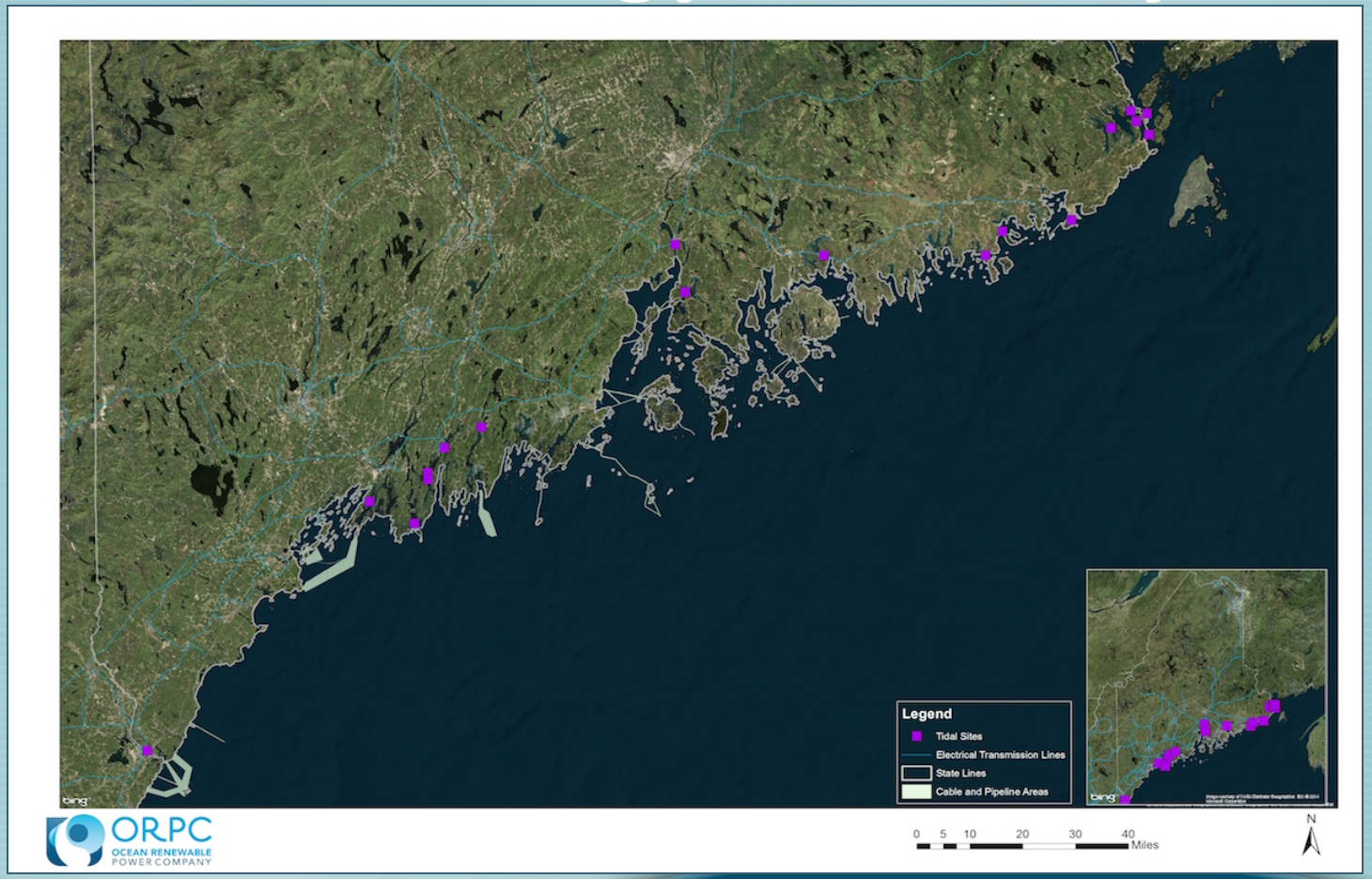
Findings

- Conventional Hydropower Potential Throughout State
- Uneconomic under Assumed Pricing
  - Energy value too low
  - Development costs too high
  - Did not include incentives, RECs, or other benefits
  - Hydro works on a different timescale

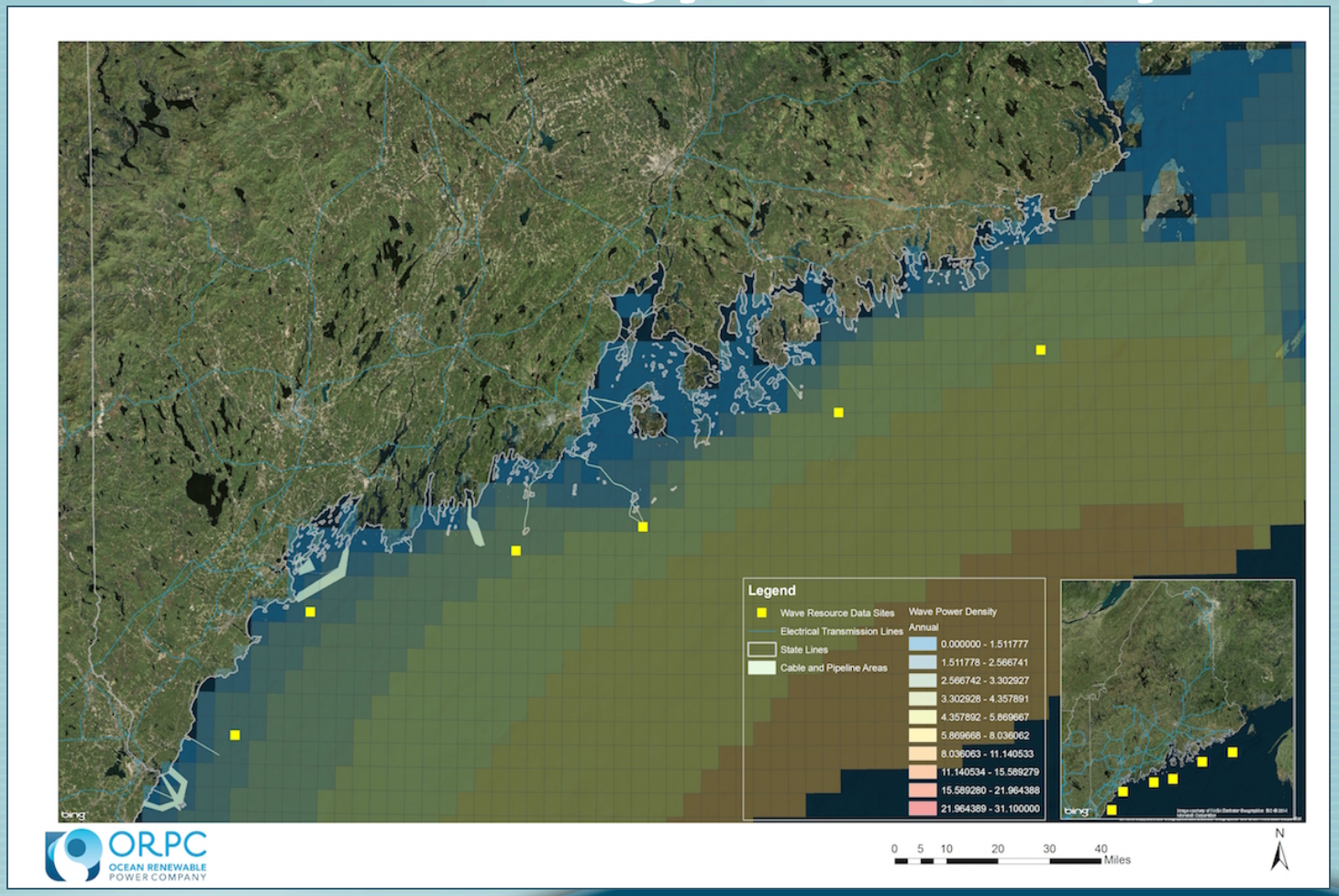
Marine and Hydrokinetic

- Tidal
- Wave
- River Hydrokinetic

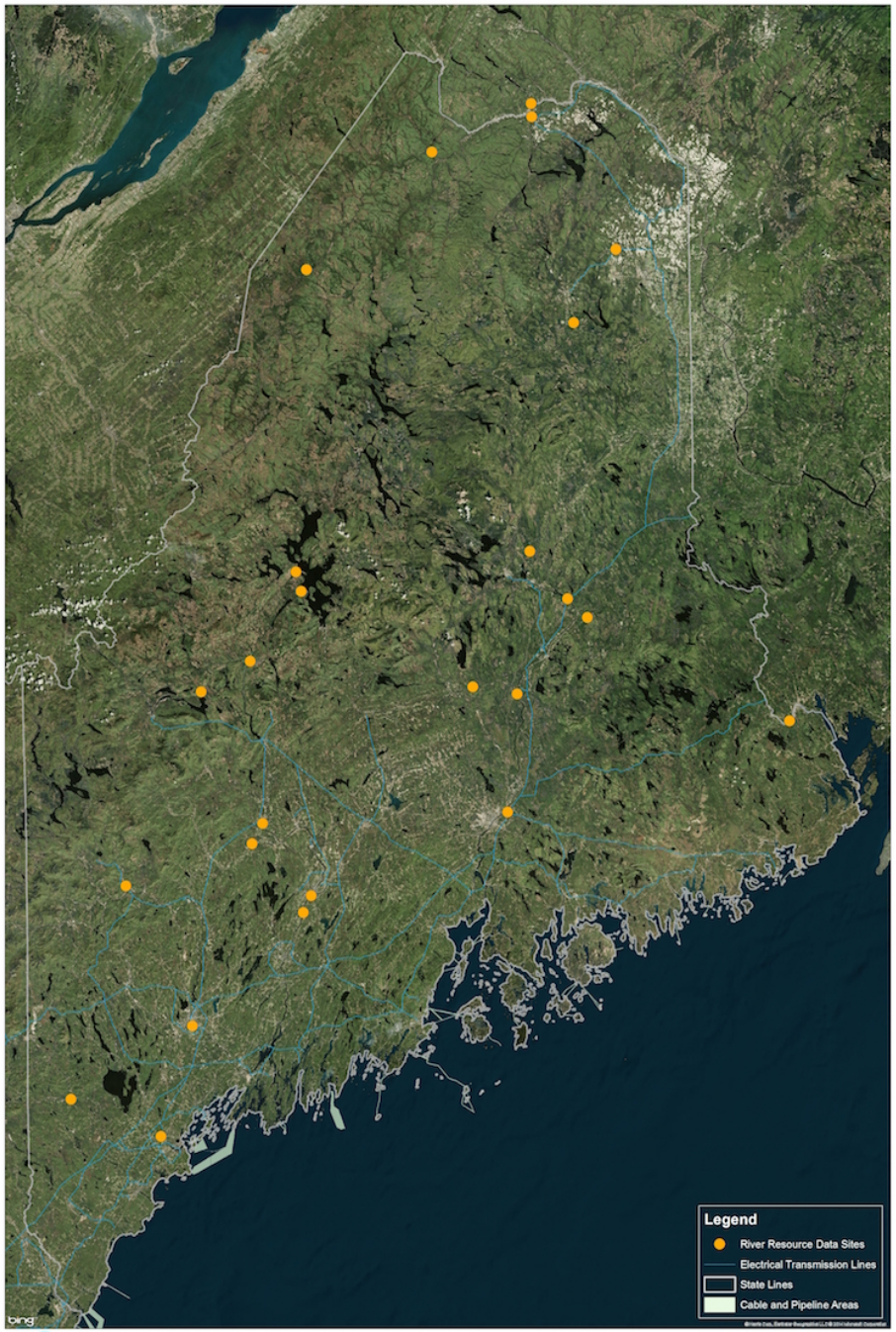
Tidal Energy Inventory



Wave Energy Inventory



River Hydrokinetic Inventory



Assessment of Regulatory Environment

- Identification of Potential Barriers
- Review of Programs in other States
- Survey of Hydropower Developers

Hydro Regulatory Processes

- FERC Licensing
- State 401 Water Quality Certification
- Other Permitting Requirements

Input from Hydro Developers

- Regulatory Hurdles
- Financing and Economic Incentives
- Infrastructure Limitations
- Promotion of Hydropower

Recommendations

Conventional Hydro Studies

- Conduit Hydropower
- Minimum Flow Units
- Emerging Technologies
- Grid Interconnection

Hydrokinetic Studies

- Site Data Collection
- Maine Communities with High Cost of Power
- Infrastructure Projects
- Integration with Conventional Hydro

Regulatory Reforms

- State Hydropower Coordinator
- Review of Maine's 401 Water Quality Certification Standards

Project Financing

- Maine RPS Requirements
- PUC and Long-Term Contracts
- State-Sponsored Financing Mechanism
- Modify Maine's Capital Investment Program
- Amend Chapter 329