

Polaris Overview

- January 2021
- David Meyers, CEO

Who Are We?

- **Leading agricultural energy management provider for energy users and utilities**
 - 400+ irrigation and conveyance pumps on network with 65 MW Peak Load Under Management (200 MW monitored)
 - Seasoned team w/10+ years DR experience leading market and technology development in Western US
- **Load Management Automation**
 - Full AutoDR customer lifecycle management: Qualification, Incentive Management, Project Management, Program Participation, M&V
- **DR Program Management and Aggregation**
 - Recruit, enable and manage DR resources
 - Event execution and network readiness
 - Aggregate load and manage settlements
- **Research & Development**
 - EPIC : *Technologies and Strategies for Agricultural Load Management to Meet Decarbonization Goals*
 - BIRD: *Integrated Irrigation & Energy Management*



CA Agriculture Sector Has Untapped Flexible Demand

- Large, binary (on/off) loads
- Dual-use storage potential (reservoirs, canals)
- Relatively flat daily profiles
- 1.1 GW DR Potential¹
- 875 GWh/day achievable load shift from the Ag sector²

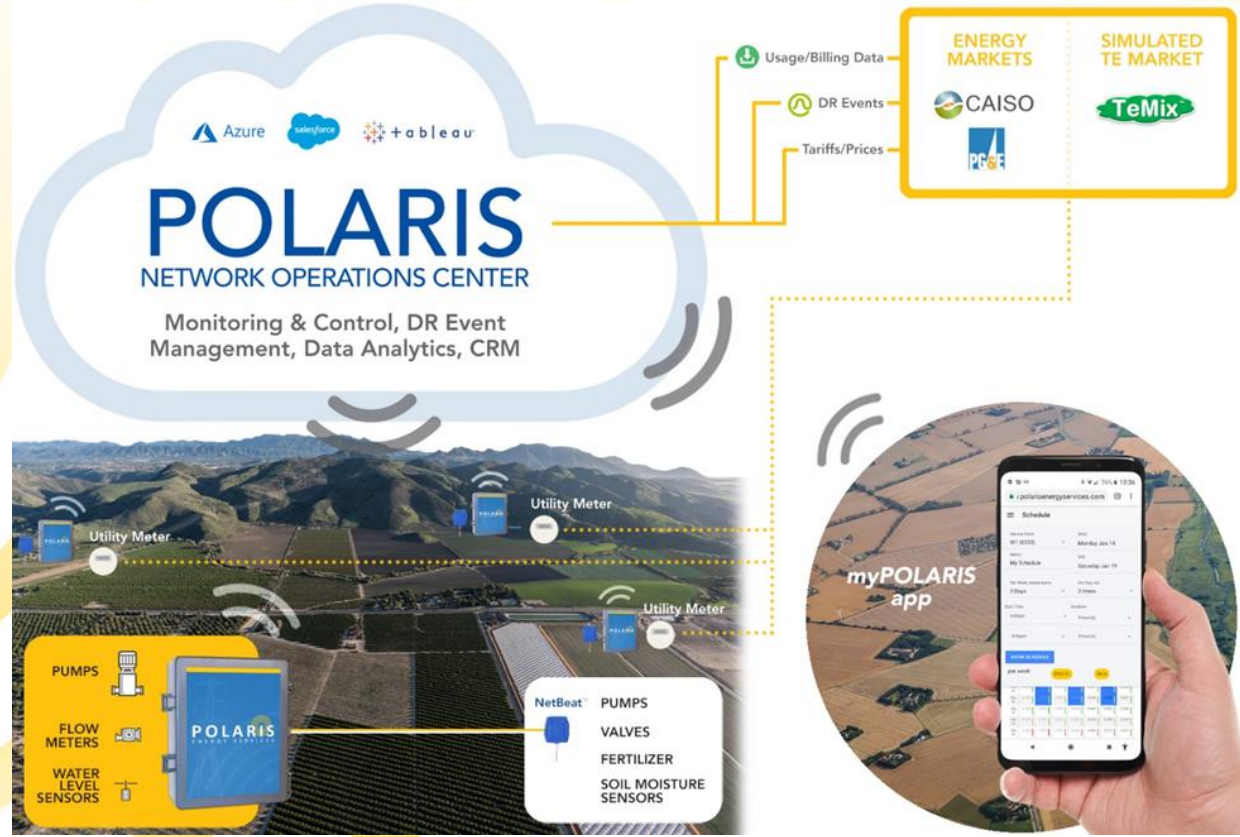


¹LBL Energy Technologies Area: Opportunities for Automated Demand Response in California Agricultural Irrigation, 2015

²LBL Energy Technologies Area: The California Demand Response Potential Study, Phase 3: Final Report on the Shift Resource through 2030

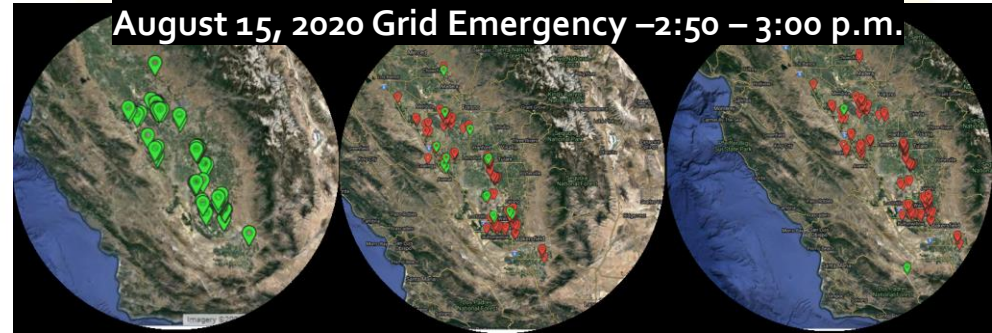
Technology Solution

- Comprehensive platform from the energy market to the valve in the field
- Situational awareness and management for large portfolios of energy assets
- Integrations with energy users' preferred irrigation control systems



Demonstrated Results

- Largest AutoDR project implementer in CA by number of sites and megawatts
- 90%+ Cumulative DR performance
- 67% of load shifted from ramp hours of 94% that can potentially be shifted in dynamic pricing pilot
 - Reported improved crop and 30% labor savings
 - Customer ROI on automation investments for farmers range from 7-41% based on energy savings alone
- 70,000 CA irrigation pumps →
 - \$87M/yr DR + SaaS (\$1B global)
 - \$375M Automation



Hourly Usage by Pump Before/During Transactive Energy Pilot: Apr - Jun



Contact Info

Thank You!

David Meyers, CEO | dmeyers@polarisenergyservices.com | (415) 722-2261

