

# *Agricultural Demand Response: Lessons From the Green Field*

*Peak Load Management Alliance  
2016 Spring Conference*

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PRESENTED BY

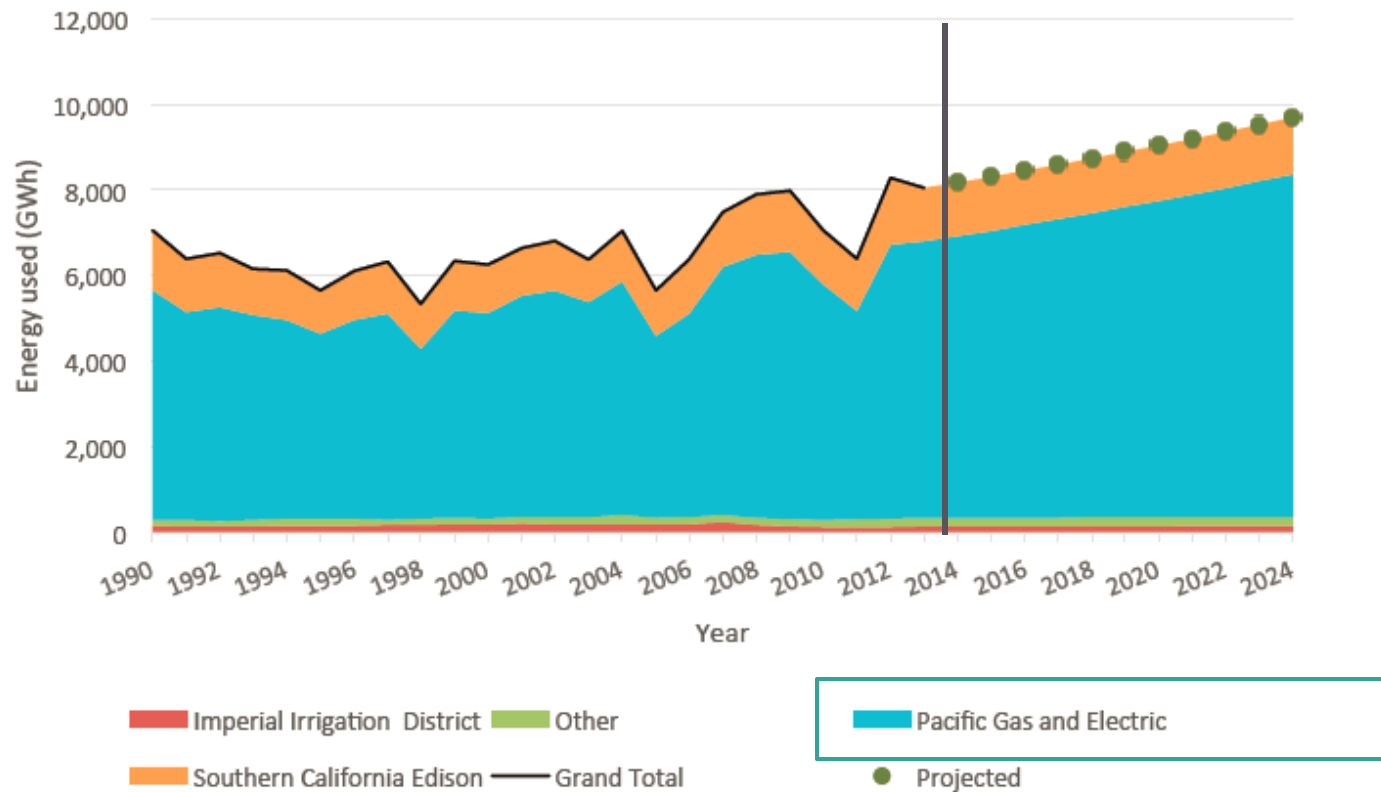
*Kitty Wang*

Energy Solutions



# CA's agricultural demand growth of 1.6 percent underestimates effect of drought

## Estimated Agricultural Irrigation Energy, by Utility

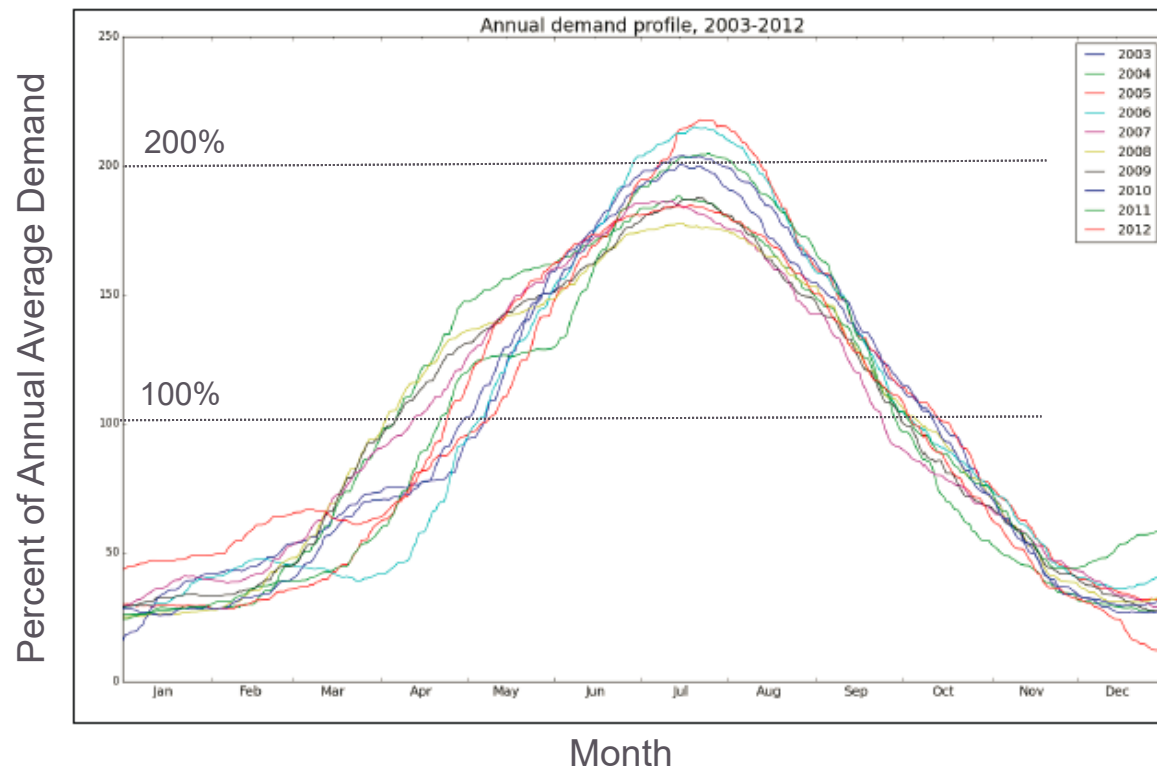


Source: Olsen, Dan, A. Aghajnzadeh, and A. McKane. August 2015. *Opportunities for Automated Demand Response in California Agricultural Irrigation*. Lawrence Berkeley National Laboratory. LBNL-1003786.



# Agricultural energy use peaks with the CA electricity grid's peak in summer

## Monthly Demand 2003-2012, For A Subset of PG&E Agricultural Customers



Source: Olsen, Dan, A. Aghajnzadeh, and A. McKane. August 2015. *Opportunities for Automated Demand Response in California Agricultural Irrigation*. Lawrence Berkeley National Laboratory. LBNL-1003786.



# PG&E's Automated demand response-enabling incentives for agricultural customers

## Overview of Program Eligibility, Requirements, and Incentives

Offering	Details
Technology incentives for ADR-enabled remote control solution on pumps	\$200/kW of calculated load shed up to 100% of project cost
No minimum kW requirement	Customer must receive electric services from PG&E, have interval meter, and 24 months of billing history
Requires DR program enrollment for 3 years	Ongoing payments for actively participating in 1 of 4 eligible DR programs
Program Services	Incentive estimation, application processing, support enrolling in a DR program, and ongoing connectivity support



ADR

Automated Demand Response Program

# SCE's Agricultural and Pumping Interruptible Program

## Overview of Program Eligibility, Requirements, and Incentives

Offering	Details
Direct load control with incentives	Monthly credit for TOU and non-TOU customers
Minimum kW requirement	At least 34 kW or 50hp motor
DR program enrollment commitment for 1 year	Events not to exceed 6 hours per day and 25 days per year
Program Services	Application processing, DR program enrollment support



# Discussion and Insights for Agricultural DR



Simple



- Education and awareness need is significant
- Compelling value proposition comes from good program design
- Simplify the message and focus on grower benefits
- Seek and create opportunities for face to face engagement
- Leverage pump maintenance and efficiency testing services or programs
- For Auto-DR, continuing efforts to increase technology availability and delivery channel development



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Automated Demand  
Response Program

# Thank you!

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ADR

Automated Demand  
Response Program