

Waking Up Before the Rooster Crows

Devising and Implementing a Successful Strategy to Increase Agricultural Energy Efficiency

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In This Presentation

All about Ag Efficiency Plus program

- Introduction
- Design
- Implementation
- Results
- Conclusions



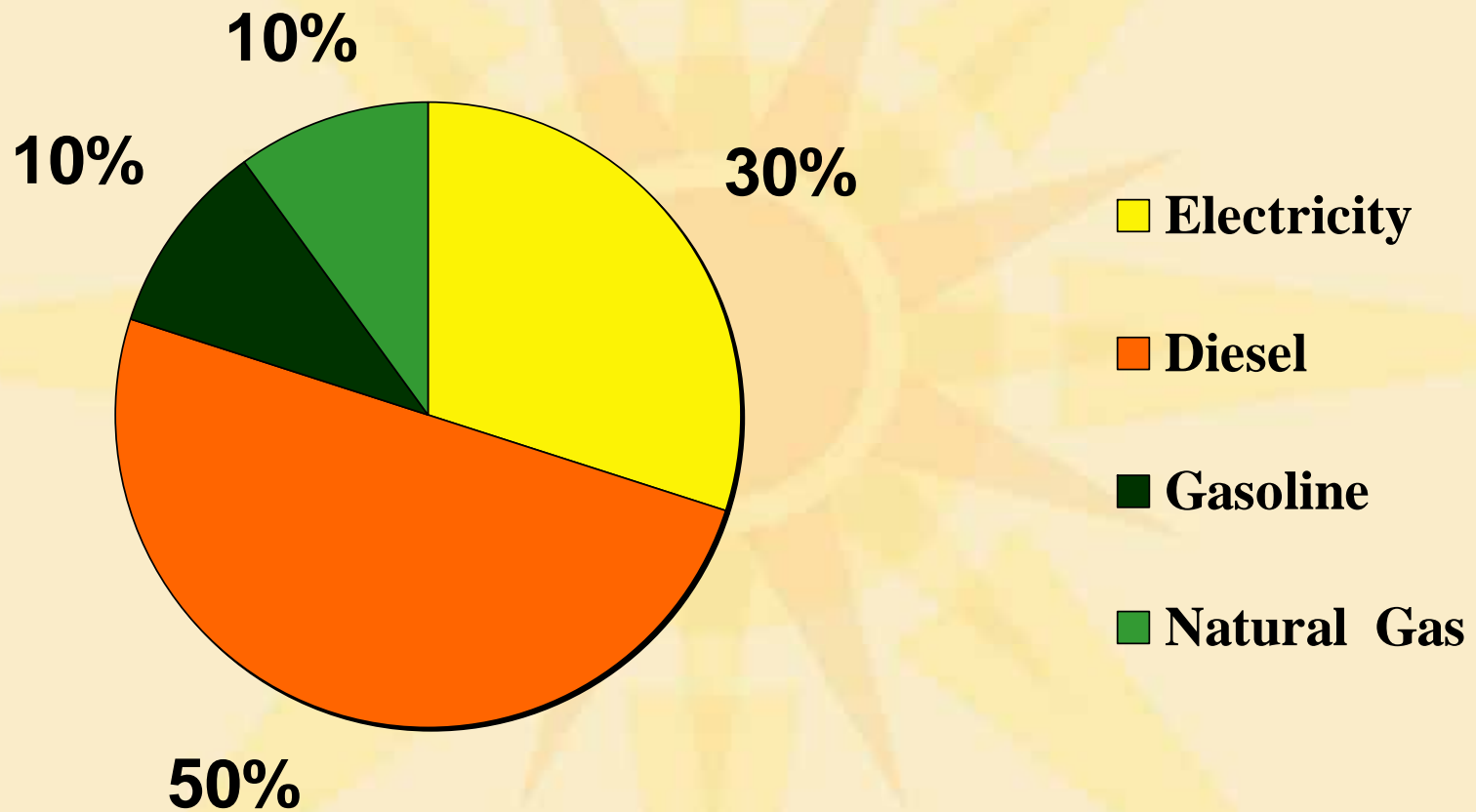
Why Agriculture, Why Now



- Substantial electricity use
- Largely untapped market
 - Have not participated in other programs open to nonresidential customers
 - Often buy used, less efficient equipment
 - Stay with conventional equipment
- Complement long-standing pump testing program in SCE service territory

Introduction

Agricultural Energy Use in California



Source: Brown & Elliott, On Farm Energy Use Characterizations, ACEEE Report IE052, 2005

Program Goals



- Work with farmers to *identify* electricity-reducing opportunities and *enable* them to install energy-efficient equipment
- Include all types of agricultural growing and processing operations
- Address all uses of electricity
- Reduce annual electricity use by 32,458 MWh and 7.03 MW on peak

Program Features



- Audits, incentives, and education
- Prescriptive and custom measures
- Measures include:
 - Lighting
 - Fans
 - Irrigation
 - Refrigeration and controls
 - Dairy processing
 - Motors
- Feed leads to and from SCE account execs

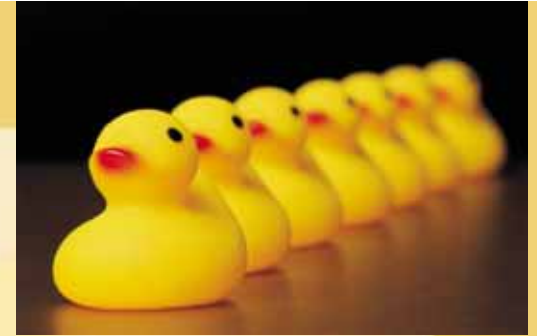
Design

Distinctive Outreach Approach



- Recruitment offers two track entry: audit and direct to installation
- Downstream program has lots of upstream outreach
- Much of the interaction with customers is in the field

Rollout Infrastructure



- Field staff works with customers and vendors at all project stages
- Call center makes cold calls and follow-ups
- Marketing staff creates promotional materials and outreach campaigns
- Real-time tracking system helps coordination between field staff and call center
- Regular contact with SCE account execs assigned to agricultural customers

Lessons from the Field



- Audits are less effective than informal, focused discussion in generating projects
- Farmers like to take things one step at a time
- Repeat contact essential for completion
- Networking with vendors is critical
- Leveraging utility reps' knowledge of the customer helps us get there before equipment decision is made
- Bringing projects to incentive claim takes even more field support than anticipated

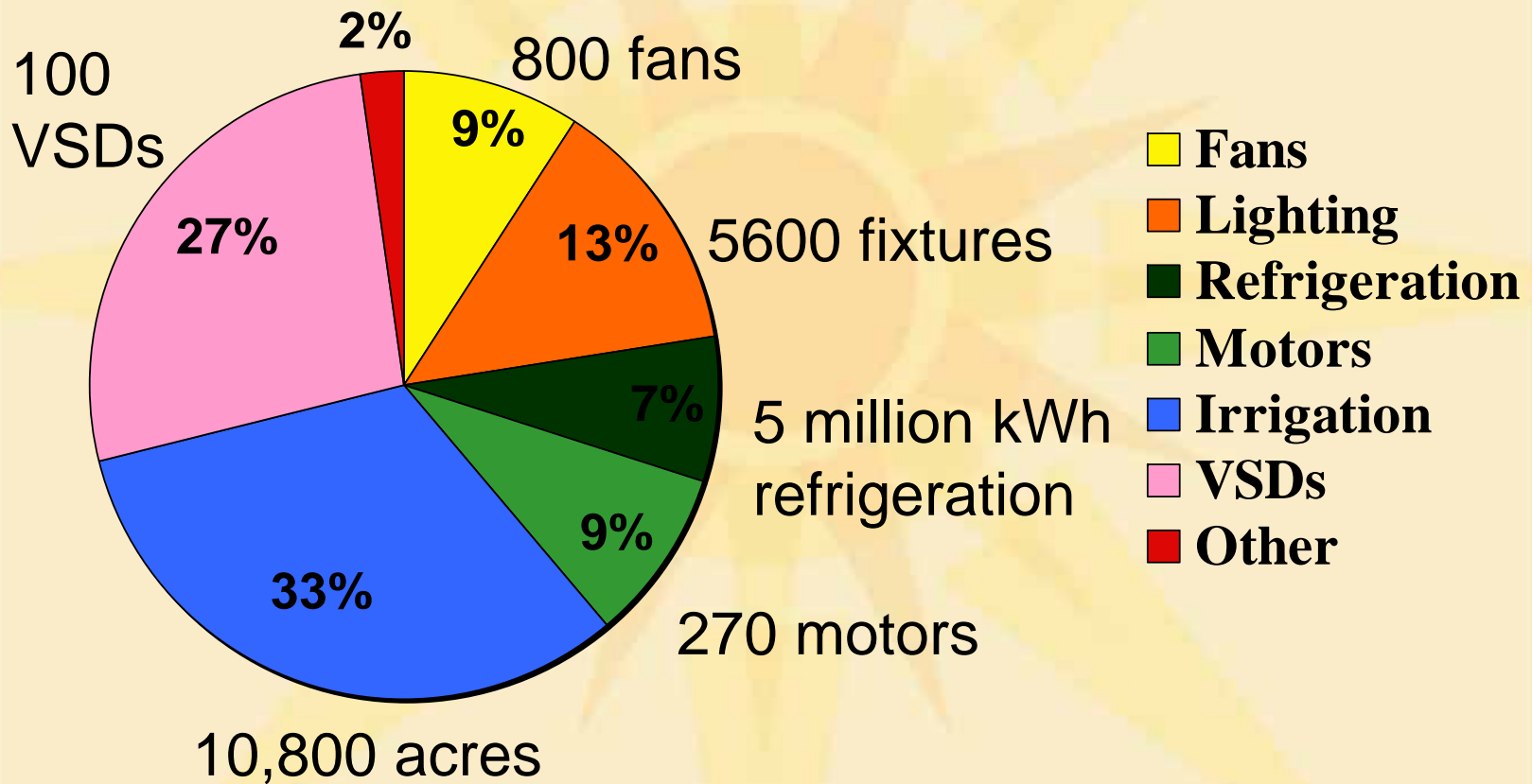
Massaging the Message



- Focus on non-energy benefits first:
 - Water conservation
 - Productivity
 - Labor costs
 - Air, water, and soil quality
- Different messages and measures for each agricultural submarket, including farmers and vendors
- Can also save money on electric bill and new equipment purchases

Results

Projects by Measure Type



Results

Vendor, Partner in Promotion



- Learned about program during irrigation installation for an existing customer
- Incorporated benefits of energy savings and incentive into sales pitch
- Now they pre-qualify their recommendations through us to ensure savings and incentives
- Win-win partnership is getting more efficient irrigation equipment into the field sooner

Results

Irrigation for Apple Grower



- Motivation: save water
- Replaced side-roll sprinkler with low-pressure micro-sprinkler trellis-designed system on 100 acres of apples
- Prescriptive measures
- Cut water use by 30%
- Also cut irrigation labor cost by 30-40% and increased production by 10%
- Save 588,500 kWh/year

Results

Night Lights for Nursery



- Motivation: increase production
- Energy-efficient twist on conventional approach
- New installation, custom project
- 23w CFL vs 100w incandescent lamps
- Now can use greenhouses year-round
- Rebate covers 13% of cost
- Happy customer installing more lights and replacing old fans to boost production further

Results

Fans Save the Day at Dairy



- Motivation: save milk production and cows
- Sweltering heat threatened cows
- New installation, prescriptive measure
- 66 56" circulation fans
- Save 124,000 kWh/year and 58 kW on peak
- Rebate saved farmer \$13,200
- Rapid response saved 100% milk production
- Word of mouth to other family members spawned 2 other projects

Conclusions

- Growers and producers receptive but very schedule-constrained
- Must be in right place at right time to get projects; working with vendors and utility reps helps a lot
- Message must have resonance with timely and pressing issues
- Takes time to gain confidence of growers and processors, but then often do multiple projects
- Requires lots of on-site support
- Lots of remaining energy savings potential

