

A Comprehensive Approach to Improving Agriculture Programs



**ACEEE Forum on
Energy Efficiency in Agriculture**

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Overview

- Summary of Iowa energy efficiency programs of Interstate Power and Light Co. (IPL), an Alliant Energy Company
- Features of IPL's Iowa Agriculture Program
- Review of KEMA's measurement and evaluation of IPL's Iowa Agriculture Program for the 2006 calendar year — *A Comprehensive Approach to Improving Agriculture Programs*



IPL Iowa – Alliant Energy Program Summary

- Regulated investor-owned utility
- Current IPL Iowa energy efficiency (EE) programs

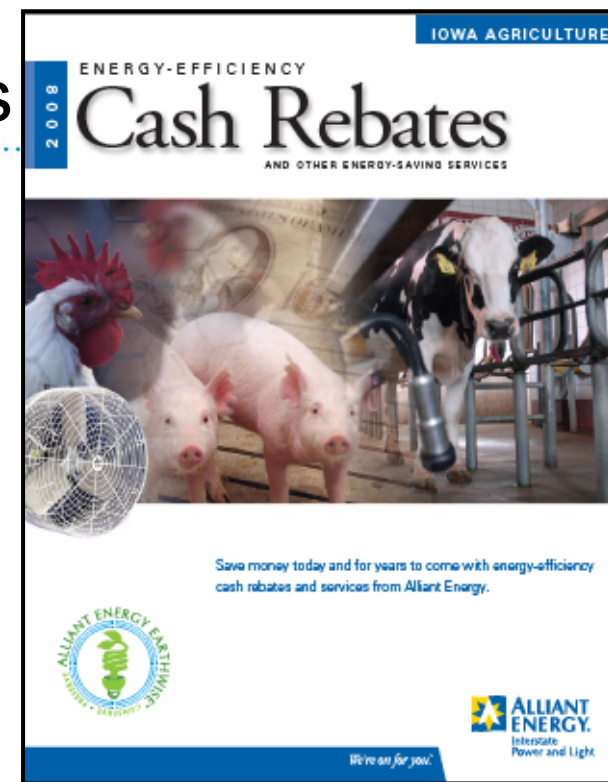
Product / Service Name	Description	Res	Sm Bus	Ag	C & I
Home Energy Audits	On-site energy efficiency (EE) audit	x			
Load Mgmt - Appliance Cycling	Remote control of AC/water heater	x			
Low Income EE Programs	Equipment rebates, education and weatherization	x			
New Home Construction	Incentives for EE construction of new homes	x			
Appliance Recycling	Safe disposal of secondary appliances	x	x		
Low Interest Financing	Low-interest financing for EE equipment	x	x		
On-line Energy Audit	Online EE audit tool	x	x		
Prescriptive Rebates	Standardized rebates for EE equipment	x	x	x	x
E-Communities (pilot)	Incentives for community-wide EE plan	x	x	x	x
Commercial New Construction	Design assistance, incentives for new buildings		x	x	x
Custom Rebates	Rebates for EE projects		x	x	x
Performance Contracting	Financing/project mgmt for EE projects		x	x	x
Farm Energy Audit	On-site EE audit			x	
Business Energy Audits	On-site EE audit		x		
Solutions Center	Customer EE newsletter		x		x
Building Operator Certification	Training for facilities managers				x
Feasibility Studies	Specialized study on EE potential in facility				x
Load Mgmt - Interruptible Program	Credits for load curtailment				x





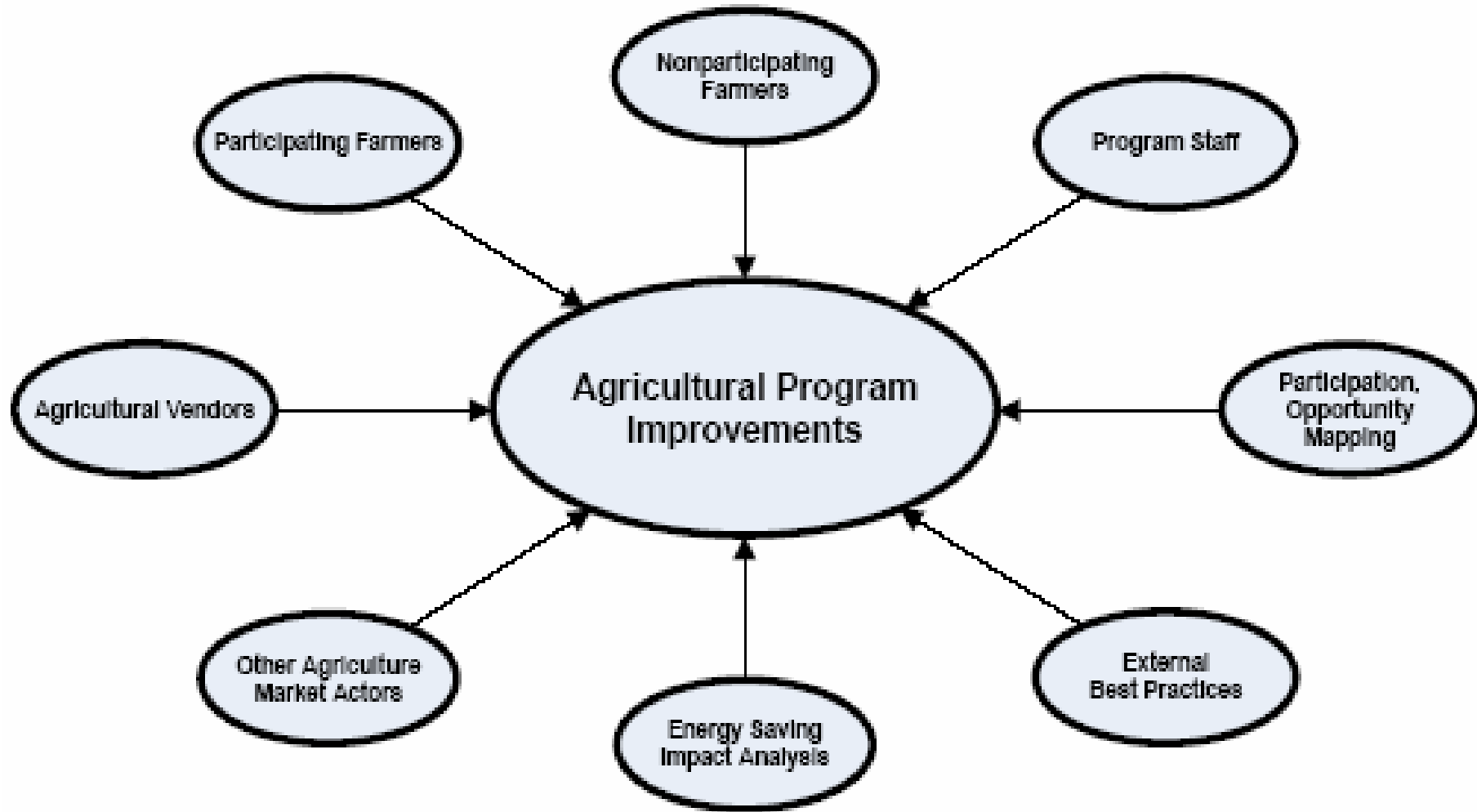
IPL Iowa Ag Program Features

- Dedicated ag field representatives
- Ag-specific prescriptive rebates
 - Includes trade ally incentive spiffs
- Custom rebates
- Free, whole-farm energy audits
- Specialized energy audits helping customers comply with state/federal loan/grant program application requirements
 - e.g., USDA 9006 grant/loan applications
- Implementation assistance
 - Referrals to qualified contractors
 - New equipment comparisons
 - Recommendations of higher efficiency equipment





Information For Program Improvements Comes From Many Sources



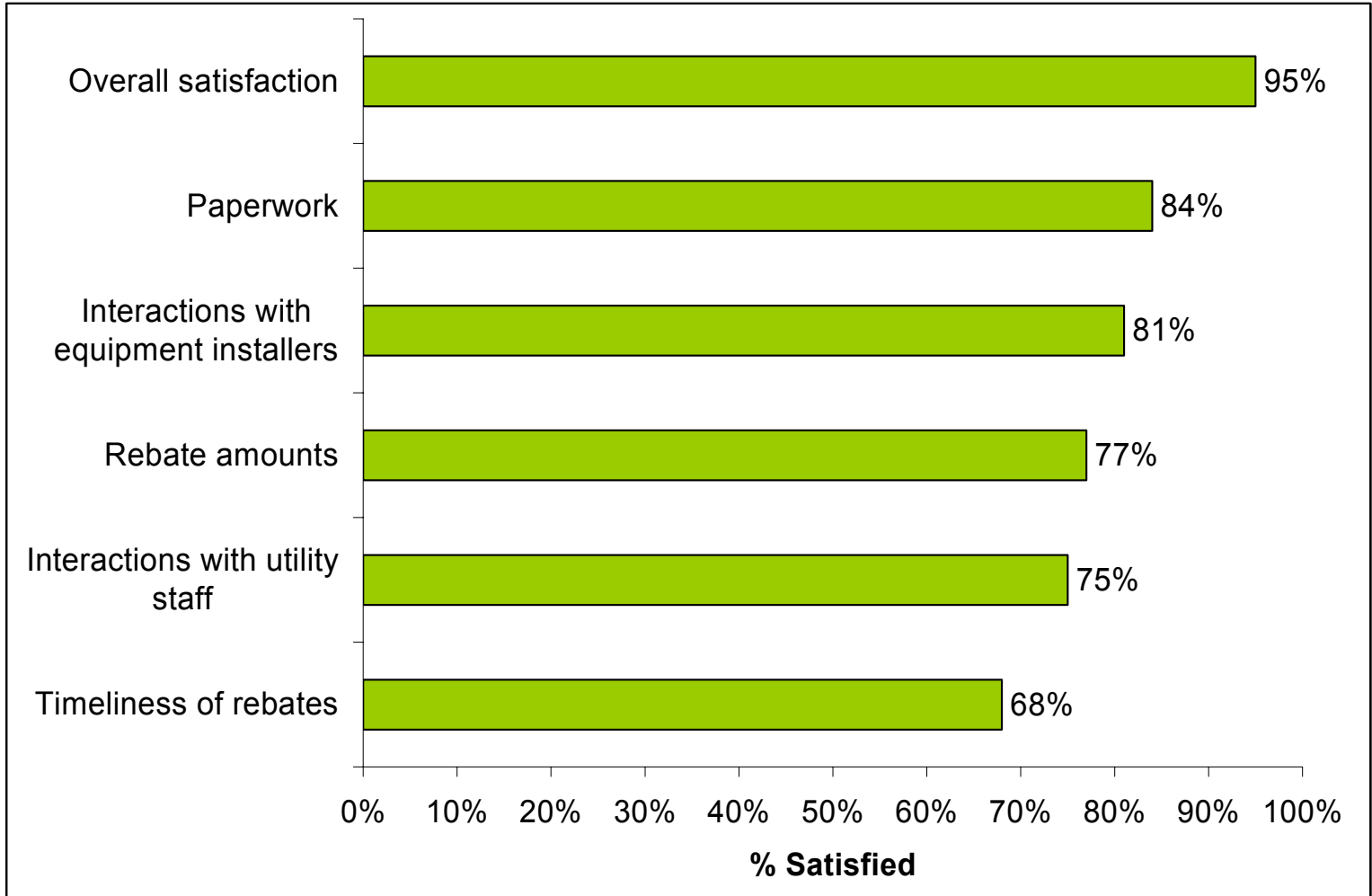


Surveying Participating Farmers

- Program satisfaction
 - Need to ask about various program processes, not just overall satisfaction
- Barriers to future EE implementation
 - Will help determine future program funding priorities (e.g., \$ for rebates vs. \$ for audits/education)
- Marketing preferences
 - Sometimes have different preferences than non-ag participants (61% of participating farmers preferred bill inserts for program info. vs. 46% for non-ag participants)



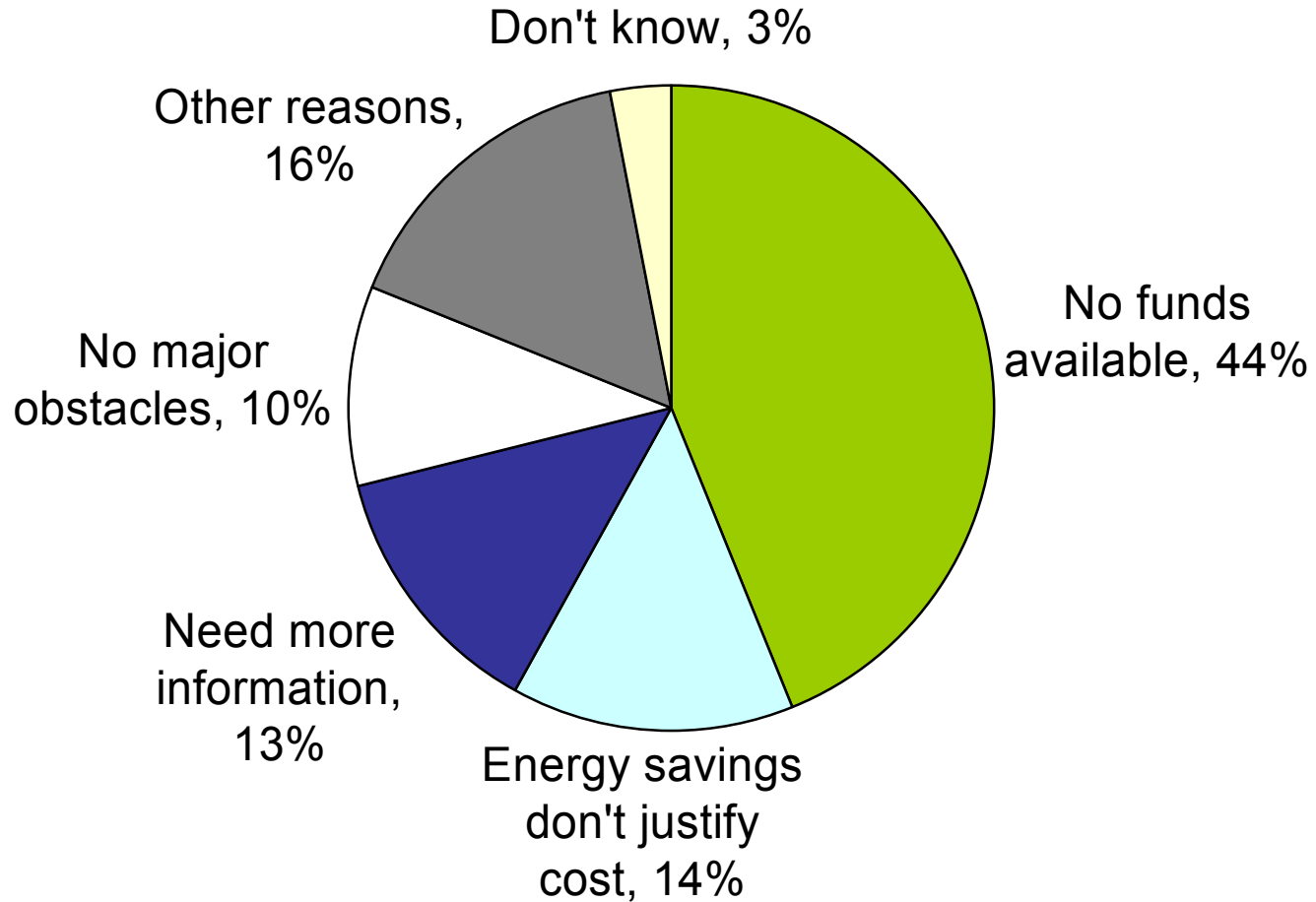
Surveys of Participating Farmers: Program Satisfaction



Summer 2006 survey; sample size = 53



Surveys of Participating Farmers: Main Barriers to Future EE Projects



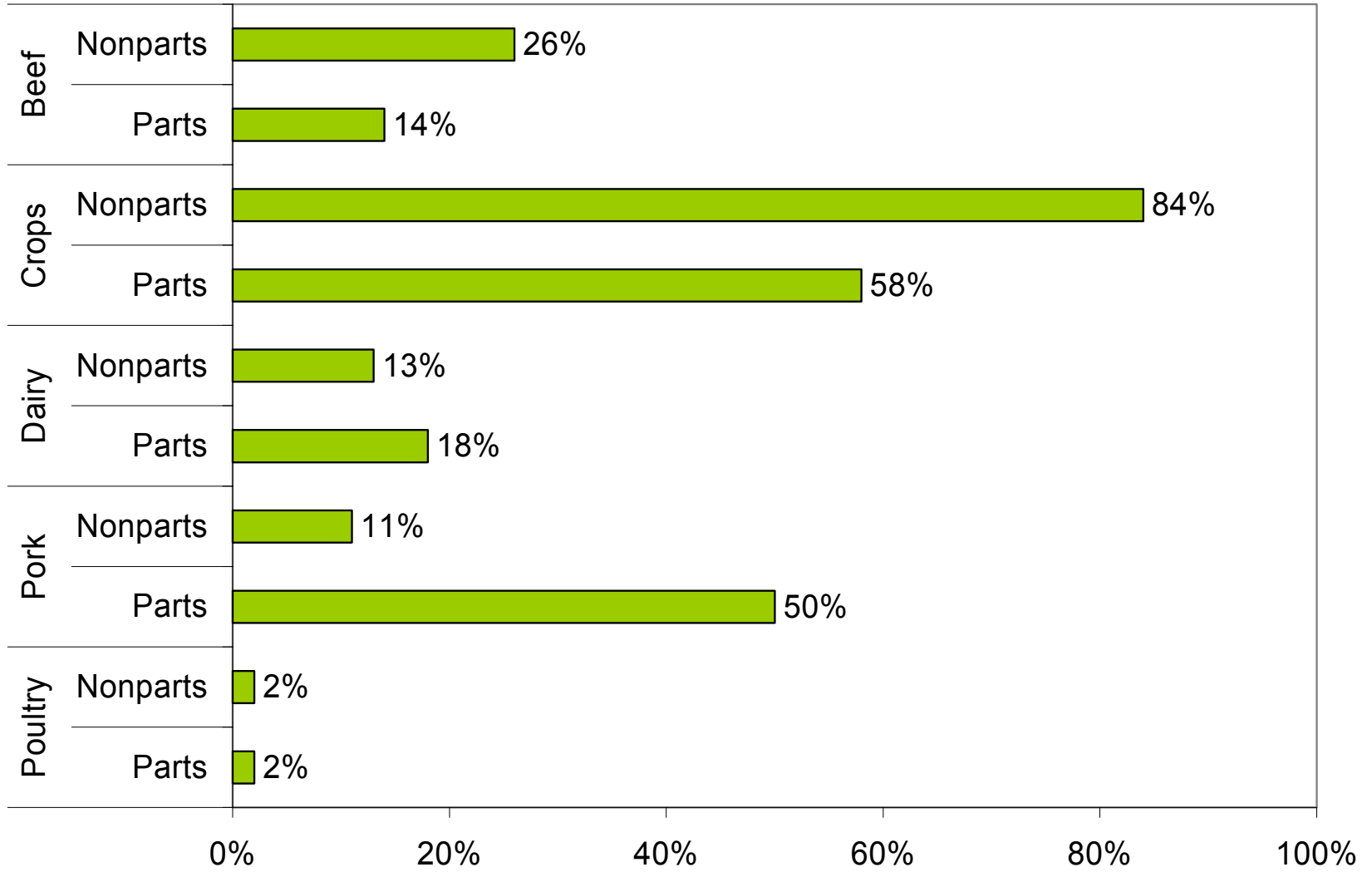


Surveys of Non-participating Farmers

- Why they're not participating
 - Usually due to lack of awareness
- Where they get their information
 - Useful for marketing program
- Attitudes toward EE, EE implementation barriers
 - If these are different than those for participants, may need new strategies to get new participants
- “Farmographics” – shows what types of farmers not participating



Type of Farming: Participants vs. Nonparticipants



2006 survey; participant sample = 52, nonparticipant sample = 63

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Surveying Agricultural Vendors, Other Market Actors

- Vendors (participating and non-participating) (2007)
 - Awareness of program offerings
 - Sufficiency of rebates, SPIFFs
 - Satisfaction with program processes
 - Barriers to participation
- Other market actors (2007)
 - Rural bankers
 - Ag extension agents
 - USDA grant administrators
- How can we better work together to reach, help more farmers become energy-efficient?



Interviewing Program Staff

- Program managers
- Field staff
 - Important to interview as many field reps as possible
 - Field reps work in different ag sectors and regions
 - New field reps may have different perspectives than more experienced ones
- Trade account representatives
 - Keyed into vendor needs



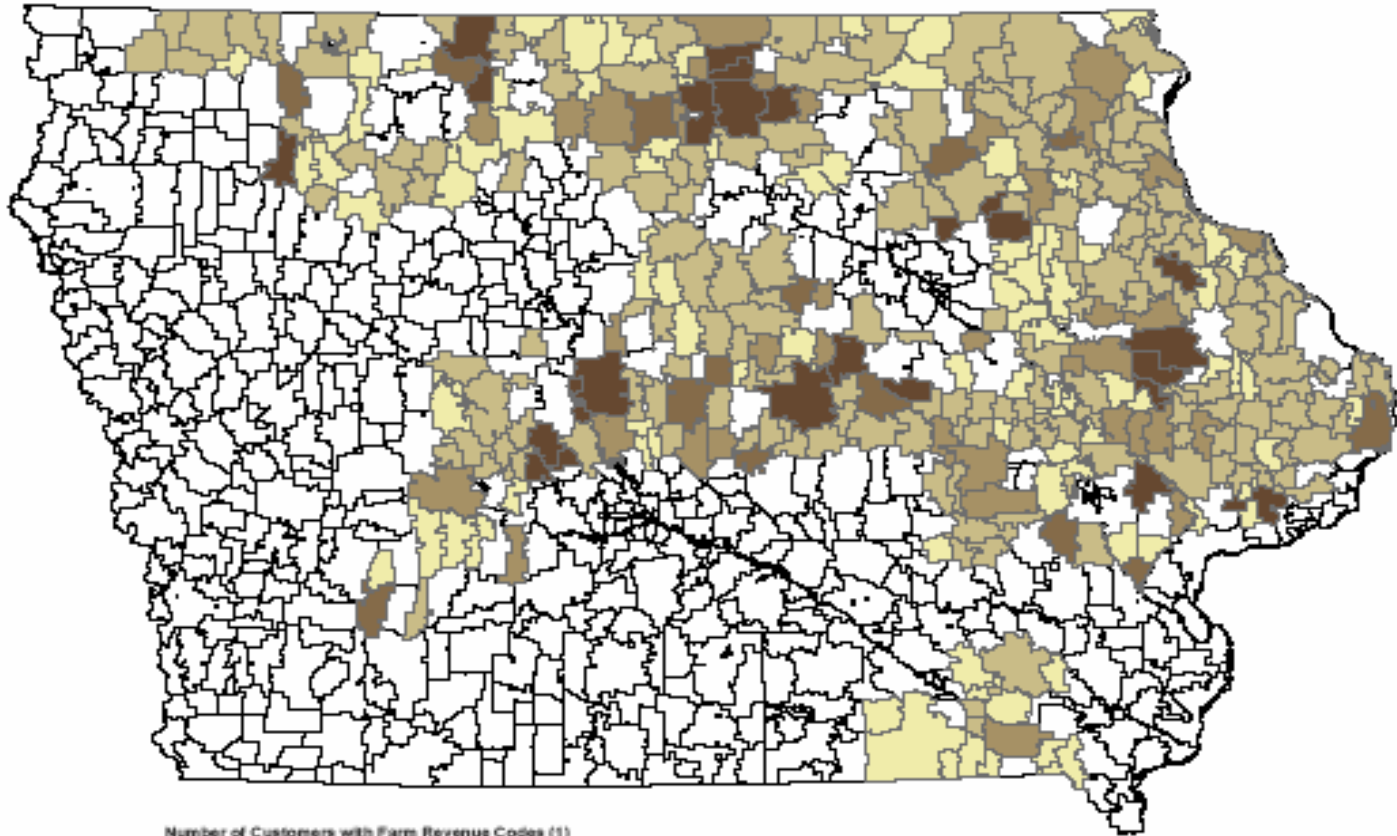
Energy Savings Impact Analysis

- Periodically review engineering algorithms
 - What engineering algorithms are we using?
 - What algorithms are other programs using?
 - What changes are needed to insure that energy savings assumptions reflect latest information?
- Audit tracking databases
 - Are the correct energy savings estimates being recorded in the program databases?
 - Are there missing values?
- Online agriculture audit tools
 - Are these producing reliable savings estimates?

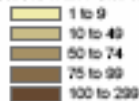


Maps of Potential Participants

Number of Customers with Farm Revenue Codes per ZIP Code



Number of Customers with Farm Revenue Codes (1)



(1) Customers who had rate codes of Single Phase Farms, Farm-North, Farm Service-Three Phase, or Farm TOD-North

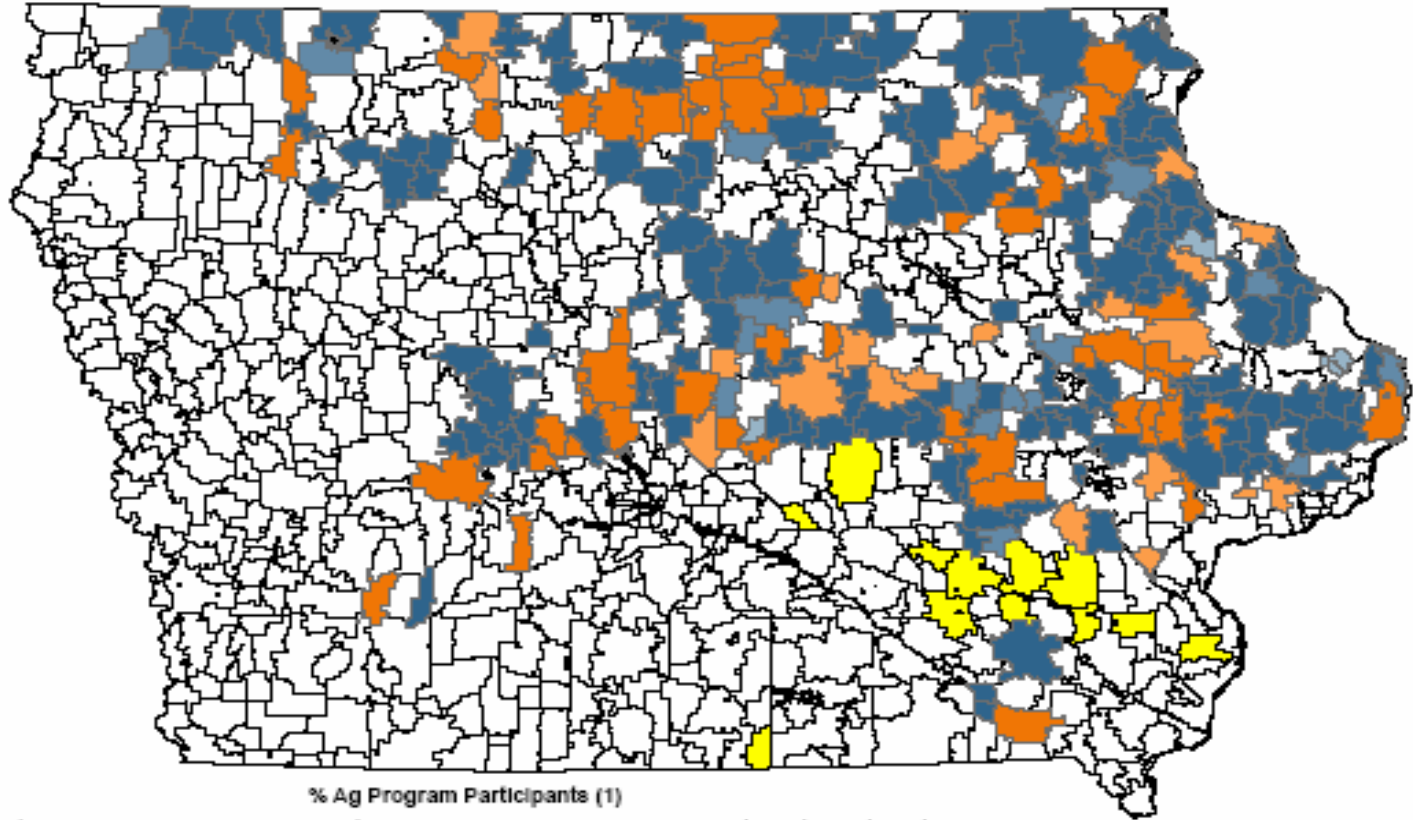
Data Source: Alliant Energy
Map design: C. Palmgren, KEMA, Inc.





Maps of Participation Levels

Areas for Potential Increased Program Participation Rates for ZIP Codes with 10 or More Farmers in 2006



% Ag Program Participants (1)

ZIP Codes with 10-49 Farmers (2)	ZIP Codes with 50 or More Farmers (2)	ZIP Codes with Participants, but no farmers
0% Participants	0% Participants	Participants, but no farmers
0.1 - 4.9% Participants	0.1 - 4.9% Participants	
5.0 - 9.9% Participants	5.0 - 9.9% Participants	
10% or More Participants	10% or More Participants	

Notes:

- (1) Customers who received Ag Program rebates in 2006
- (2) Customers who had rate codes of Single Phase Farms, Farm-North, Farm Service-Three Phase, or Farm TOD-North

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Interviews with Other Ag Program Managers

- Best practices
- Lessons learned
- Benchmarking comparisons
 - Energy savings goals
 - Number of ag field reps per ag customer
- Challenges
 - Hard to find similar external ag program
 - Some ag program implementation contractors view methods, lessons learned as proprietary info



Thank You

- For information on Alliant Energy Programs
 - www.alliantenergy.com/ag
 - 1.866.ALLIANT (1.866.255.4868)

