



IOWA ENERGY CENTER

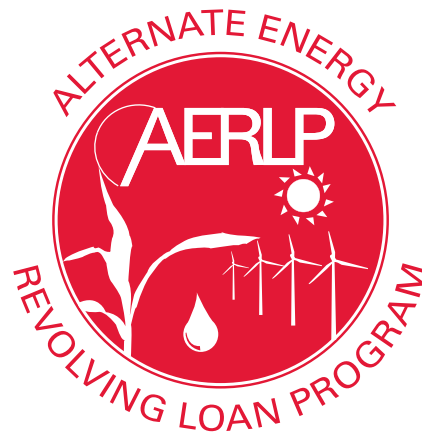
**Advancing Iowa's Energy Efficiency and
Renewable Energy Use Through
Research, Demonstration and Education**



ACEEE Forum on Energy Efficiency in Agriculture: Leveraging Multiple Programs

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Director
Iowa Energy Center**

Alternate Energy Revolving Loan Program (AERLP)



Program Background

- Created by Iowa legislature in May 1996
 - 1997 Iowa Code, Section 476.46
 - Amendment to the 1990 Iowa Energy Efficiency Act
- Encourages development of alternate energy production facilities in Iowa
- Funded via
 - Iowa's investor-owned utilities through 3-year special assessment on gross intrastate revenues
 - 0.085% of gross electric and gas intrastate operating revenues during 1995-1997
 - \$5.9 million base funding
- Amended in 2002 to permit up to half of the accrued interest income to be spent for program promotion & administration



AERLP Description

- **Revolving fund structure**
- **Competitive application process**
 - All individuals and groups are eligible except Iowa's gas and electric utilities that are not required to be rate regulated
- **Funds are leveraged against matching funds**
- **Partnered with the banking community to originate and service loans**
 - Participation Agreement
- **Owner reporting requirements**
 - Owners Agreement



AERLP Program Highlights

■ **AERLP Funds**

- up to 50% of the financed project cost
- \$250,000 maximum
- 0% interest rate
- 20 year maximum term
- negotiated repayment schedule
- repayments revolved back into fund for further loans

■ **Lender Funds**

- matching funds not less than AERLP
- market rate interest rate
- loan term not less than AERLP term
- repayment collection & distribution to AERLP

AERLP Projects

■ Residential

- Small wind turbines
- Photovoltaics & solar hot water
- Corn & woodburning stoves/furnaces

■ Commercial & Industrial

- Large wind turbines
- Livestock manure digestion to power
- Ethanol production
- Biodiesel production
- Hydroelectric power
- Refuse waste to heat/power



AERLP Projects



AERLP Projects



USDA 9006 Grants

- **25% grants for renewable energy, energy efficiency projects**
- **Many renewable energy projects in Iowa eligible for both USDA 9006 grants, AERLP loans**
- **Iowa Farm Bureau, USDA, Iowa Energy Center held joint informational meetings all around Iowa**
- **Significant portion of winning USDA 9006 projects use AERLP, too**

RD&D Collaborations

- Partnerships create financial leverage and impact
- Allow small players to aggregate their efforts
- Increasingly common way of doing business
- Can be applied to ag efficiency issues

STAC

- State Technologies Advancement Collaborative
- An innovative approach for the US Department of Energy and States to work together
- A mechanism for joint planning and procurement
- A formal intergovernmental agreement among the US Department of Energy (USDOE), the National Association of State Energy Officials (NASEO), and the Association of State Energy Research and Technology Transfer Institutions (ASERTTI)



How Does STAC Operate?

- Planning conducted by joint teams of USDOE, NASEO, ASERTTI personnel
- Procurements developed by Executive Director
- Proposals reviewed by teams of experts from government, academia, national laboratories
- Formal award contracts issued by NASEO
- Projects tracked by Executive Director



How Is STAC Funded?

- Special appropriation from Congress
- Funds from USDOE programs
- Matching funds from States and their partners
- Match requirements vary with the appropriation (from 20% to 55%)



ACEEE Technology Assessments

- ACEEE has completed a series of examinations of the energy savings potential and cost effectiveness of various technologies
- Multiple sponsors have supported each assessment
- The results become publicly available



National Lighting Product Information Program

- Lighting is a major energy using technology
- NLPIP provides independent test data on technology performance
- Also provides educational materials
- Multi-sponsored program
- In operation over a decade
- Has changed the market



ASERTTI Digester Protocols

- Developing standards methods for measuring and reporting the performance of anaerobic digesters
- Supported by multiple states



Other Collaborations

- Compressed Air Challenge
 - National Building Controls Information Program
 - ASERTTI Distributed Generation Protocols
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- Is there an unmet need in ag energy efficiency that an RD&D collaboration could meet?



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