



# IOWA ENERGY CENTER

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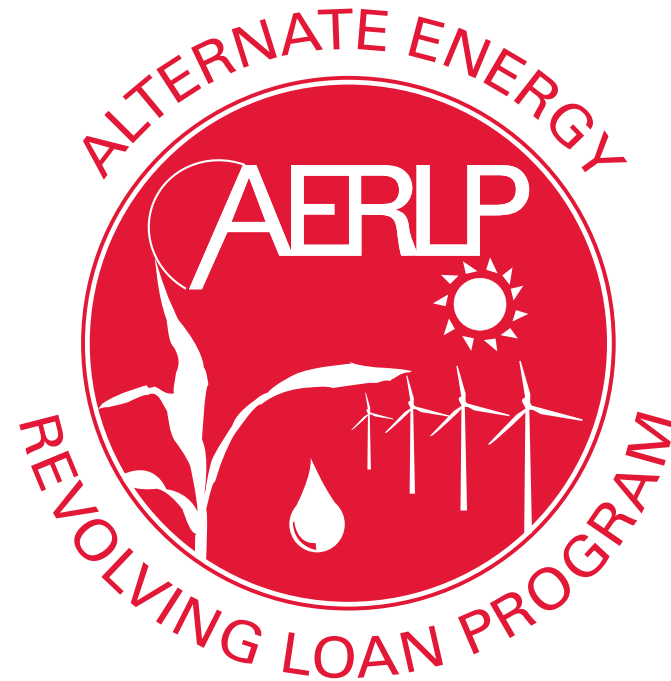
**Advancing Iowa's Energy Efficiency and  
Renewable Energy Use Through  
Research, Demonstration and Education**



# 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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**[www.energy.iastate.edu](http://www.energy.iastate.edu)**

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