

# **Weatherization, Efficiency, & Carbon Opportunities**

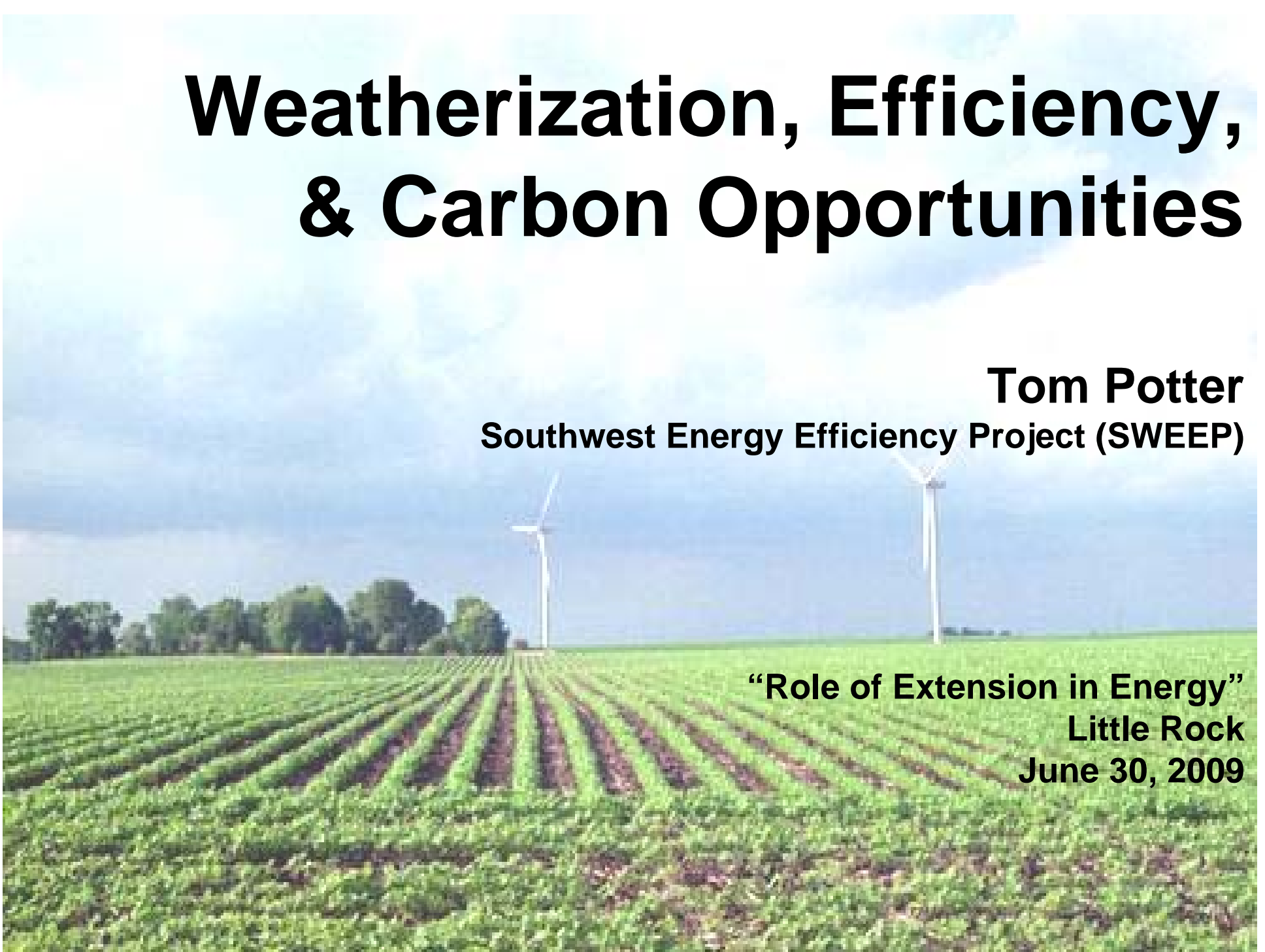
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**“Role of Extension in Energy”**

**Little Rock**

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# Summary Overview

- **Great rural prospects for energy**
- **Unique rural economic opportunities**
- **Extension Alert! Critical need for alternative delivery mechanisms**

# Outline

- **Introduction**
  - What isn't changing
  - What's changed and is changing fast
- **A new, rational approach: CEDAR**
  - Rural payoff potential
  - Extension role
- **Unmatched energy opportunities**
  - Next steps & prospective partners

# Unchanged in Rural America

- **Very slow uptake on energy, due to**
  - **Historical resistance to change;** too many rural institutions taking a “wait and see” position
  - **Lack of population density,** so program design is harder
  - **Few user-friendly energy business models,** so path to profit is not clear

# Changed & Changing Fast

- **Rural economy slipping even more**
  - Some utility arrearages are at record highs
- **New national policy:**
  - *Energy Transformation*; rural has big role
- **We're getting better at applying "what works"**
  - Fewer re-treads of urban models that don't work in rural areas

# New Cost-effective Approach: C-E-D-A-R

- **CEDAR** is rational, comprehensive, integrated and anti-silo (finally!)
- **CEDAR's** four on-site steps (learn, do, tech, fit) emphasize the primacy of human factors
- **CEDAR** will yield >45K new rural hires to address 14M rural homes over 20y (part of the 170K new alt-energy rural jobs impact)

# Five CEDAR Elements

- **Conservation is applied**
  - **Low-cost/no-cost, mainly behavior, before...**
- **Efficiency**
  - **Mostly upgrading materials & equipment, before...**
- **Demand peak reduction**
  - **Expanding efficiency to power grid level, before...**
- **Adders of non-metered net reductions**
  - **E.g., Vehicle CEDAR; Bio-char, 3Rs, before...**
- **Renewables**
  - **Solar, Wind, Geothermal, Bio-fuels**

# Rural CEDAR Payoff – The Big Picture

- **Yields desirable national impacts**
  - **Improves ag/rural sustainability**, and keeps the next generation on the land
  - **Introduces resource-based energy production** as a reliable new source of rural income
  - Launches a new era of major **rural workforce development**



# Rural CEDAR Payoff – Grass-roots Effects

- **Improves regionally-appropriate rural economic factors**
  - **Reduces operating costs** for homes, farms and small businesses
  - **Improves prospects** for new forms of farm-scale income
  - **Creates better rural jobs** and more attractive rural career options

# Extension's Role is Key

- **To**
  - **Lead** credible, actionable information, training, & education re: CEDAR
  - **Add value:** the final step in ag/rural energy research must be demonstrating & applying appropriate elements of CEDAR to benefit rural development
  - **Promote** practical ways to reduce energy & sequester carbon under CEDAR

# Unmatched Energy Opportunities - I

- **Complementing a “bio-based” focus, we should use unique rural niches to:**
  - Rationally invest in deteriorating rural assets (**buildings & human resources**)
  - Ramp up the contribution of **renewables**
  - Improve the efficiency of the **rural grid**
  - Reduce non-metered **rural impacts**
  - Address the **energy/water nexus**
  - Take a big bite out of the **U.S. carbon burden**

# Unmatched Energy Opportunities - II

- **Complementing a “bio-based” focus, we can address the “Ultimate Big 3” rural issues with the CEDAR Protocol:**
  - **Reduce direct and indirect energy cost impacts** on rural homes, farms, and businesses
  - **Net-absorb GHG emissions for a fee**
  - **Revitalize rural economies** with many new forms of energy-related income, jobs, and career options

# Next Steps for Extension

- **Check CEDAR out**
  - Is this for real? How much can each agent do?
- **Build on a good start**
  - First wave of rural wind = new rural income, jobs, and tax relief; Coming up: 10x turbines
- **Get personally involved**
  - If CEDAR looks good, get on board! See how energy re-training can advance this approach
- **ID rural \$ interests & get them involved:**
  - E.g., Feed & Seed, Implements, Livestock, Farm Insurance, Banks, Legal & Accounting, Real Estate, Utilities

# Summary

- **Great rural prospects for energy**
- **Unique rural economic opportunities**
- **We're depending on you to help field new ways to capture them!**



# **Thanks for your attention**

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