

# EEsmarts Process Evaluation Follow-up 2008 Report

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# Overview of Presentation

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# Evaluation Activities & Methods

- Interviews with program decision-makers
  - Five program administrators representing CL&P, UI and ECMB
- Interviews with program “gatekeepers”
  - Nine interviewees were teachers, principals, science curriculum coordinators, education consultants, and district-level administrators
- An online survey of 190 eesmart teachers and potential users
  - 122 eesmart teachers completed the survey (29% response rate)
  - 68 teachers who had never used eesmart materials completed the survey (10% response rate)
- Review of existing program materials

# Composition of the Online Survey Sample

- Majority from the Ansonia, Bridgeport, and Hartford school districts
- Of the total 190, 24 were science curriculum coordinators
- All but 13 had taught in grades K-9 in Connecticut schools for both 2007 and 2008
- Respondents were from all grade levels that the eesmart program serves, with most of the respondents being 2<sup>nd</sup>-6<sup>th</sup> grade educators
- Respondents were highly energy-conscious

# Key Findings and Recommendations for Program Impacts

- eesmarts teachers were significantly more likely to feel prepared to teach on science and energy
  - Teachers express enjoyment of and satisfaction with the program and believe that it does impact themselves and their students
- ***GRG recommends that the utility companies continue with the eesmarts program, reach out, and expand to other school districts throughout Connecticut***
  - The program has been a success in training educators and should continue to be available to Connecticut educators free of charge
  - Expansion of the program to new school districts can expand the program's influence and ability to carry out its mission

# Specific Recommendations for Program Impacts

- Conduct a needs assessment that would allow eesmart's administrators to have a gestalt of overall programmatic state
  - leadership structure
  - needs of the program's target audience
  - resources and assets
  - whether or not program assets are being used optimally
- Assess use of incentives for teacher attendance at workshops

# Key Findings and Recommendations for Program Focus

- The program's shift to professional development has increased participating teacher's self-perception of competence in energy practices and their ability to teach on energy practices
  - These successes can be more readily seen if the program is more strategic about which teacher outcomes are important to track
- ***GRG recommends concentrating efforts on better recording of the quality of teacher training and the impact of training on teacher classroom activity***
  - Continue to use the Enernet for recording and consolidate all of the evaluations the Enernet records

# Specific Recommendations for Program Focus

- Include quality indicators of teacher training on the Workshop Evaluation Form:
  - overall quality of workshops,
  - changes in teacher knowledge about science topics,
  - convenience of attending the workshops,
  - desire to participate in future workshops, and
  - understanding of the scope of what eesmarks offers to teachers.
- Use pre- and post- tests for teachers instead of students to measure teacher learning of energy concepts
- Gain additional feedback on Teachers
  - how equipped teachers feel to teach energy
  - changes in teacher ability to teach on science concepts
  - changes in teacher teaching and presentation style
  - teacher's ease of obtaining lesson materials

# Key Findings & Recommendations for Program Implementation

- The program has limited the distribution of materials to teachers who have attended workshops
- Though program administrators and decision-makers feel that this change was efficient and effective, some science curriculum coordinators and other gatekeepers were not pleased with this decision
- ***GRG recommends making professional development workshops easier for all eligible teachers to attend***
  - In line with offering “customized” workshops, eesmarts should strive to offer “customized” configurations using creative solutions to address barriers to teacher attendance

# Specific Recommendations for Implementation

- Lower the minimum required number of teachers for a workshop or combine teachers from neighboring districts to get the minimum amount
- Create incentives for teachers who use the program within the first few months after receiving training
- Offer “starter kits” available at the workshops for teachers to take and use immediately
- Increase the number of workshops for elementary school teachers
- Make teaching training workshops open to student teachers

# Key Findings & Recommendations for Program Alignment

- Alignment with Connecticut's State Science Framework and Connecticut Mastery Tests has made the program more credible as a science-based curriculum and more attractive to curriculum leaders and teachers
  - This positive aspect of the program is underemphasized in program materials
- ***GRG recommends continuing to provide support for embedding the program materials in the State Frameworks curriculum and address curriculum weaknesses***
  - Because of its uniqueness, this program has the opportunity to make itself an indispensable element to the school districts it serves
- ***GRG recommends advertising and highlighting the alignment of program curriculum materials with the State Science Framework so as to make the program most attractive***
  - As a beacon of this program, eesmarts should underscore how the program aligns with state standards to curriculum leaders and teachers in order to increase buy-in

# Specific Recommendations for Alignment

- Be explicit about how eesmarts lessons and *activities* within lessons reflect state standards and preparation for embedded tasks
- Address curriculum weaknesses
  - Activities or language that are not grade-level appropriate
  - Missed opportunities to infuse higher order thinking (and writing)
  - Lack of clear learning objectives for students
  - Student materials should allow students to interface with making energy-efficient decisions
- Eliminate activities and materials that do not map onto the Connecticut state frameworks or mastery standards

# Key Findings & Recommendations for Program Partnering

- eesmarks program decision-makers have been very satisfied with their decision to hire PIMMS as the curriculum vendor and PIMMS' expertise on teaching science curriculum
  - Teachers and gatekeepers reported that PIMMS was an important part of their decision to be involved
- ***GRG recommends continuing to retain the services of PIMMS and further investigating other opportunities to partner with them***
  - The relationship with PIMMS has strengthened program credibility and helped the program gain exposure through PIMMS' existing networks
  - PIMMS and SLC both offer eesmarks participants added benefit and makes eesmarks more attractive as a multifaceted “package”

# Specific Recommendations for Partnering

- eesmarts and the SmartLiving Center/Museum Partnerships are two distinct CEEF\* Programs whose efforts complement each other
- eesmarts should continue to promote a bus reimbursement component to support school districts in offering the SLC as an additional means of furthering student learning
- Ensure a connection between the two programs beyond the program administrator as the common denominator

# Key Findings & Recommendations for Program Goals

- Program decision-makers have not set an end-date for the program, believing that the program needs to continue in order to see how effective changes to the program have been in educating Connecticut teachers about energy practices
- ***GRG recommends that program leaders think strategically about which long-term outcomes are most important and begin to track those now as part of the developing 10-year plan, using a logic model***
  - Consider measuring long-term outcomes that are in line with the mission of the program

# Specific Recommendations for Program Goals

- Use planning tools such as a logic model to articulate program outputs and how those relate to program outcomes
- Measure outcomes related to teacher training quality in the short-term, and long-term usage of program materials
- Use geo-referencing to show areas (e.g. school districts) where the program materials are being used
- Recognize that while funds for cost-effective efficiency improvements may continue to be available, current programs may not have funding priority over new initiatives
- Continue to specialize in teacher training in energy and show that the program is effective in achieving relevant long- and short-term goals