



**Evaluating Energy Savings and GHG
Emissions in Six Projects in the CIS: A
Comparison between Initial Estimates and
Assessed Performance**

IEPEC 2010

Susan Legro

Overview

- Why these projects?
- Approach
- Findings
- Variables influencing performance
- Recommendations
- Implications

Why these projects?

- Qualitative “lessons learned” review raised questions on project monitoring
- Project pool with common features implemented over time
- Use of project “results” for program planning



Background



- Multi-lateral fund announced at the UNCED in Rio de Janeiro (1992) to address *global* environmental issues
- Multiple “implementing agencies”
- Key focal areas, operational programmes

Project Pool

- District heating projects in 5 countries
- Direct emission reductions from upgrades, improved organization
- Indirect emission reductions from replication to other cities, utilities



Approach

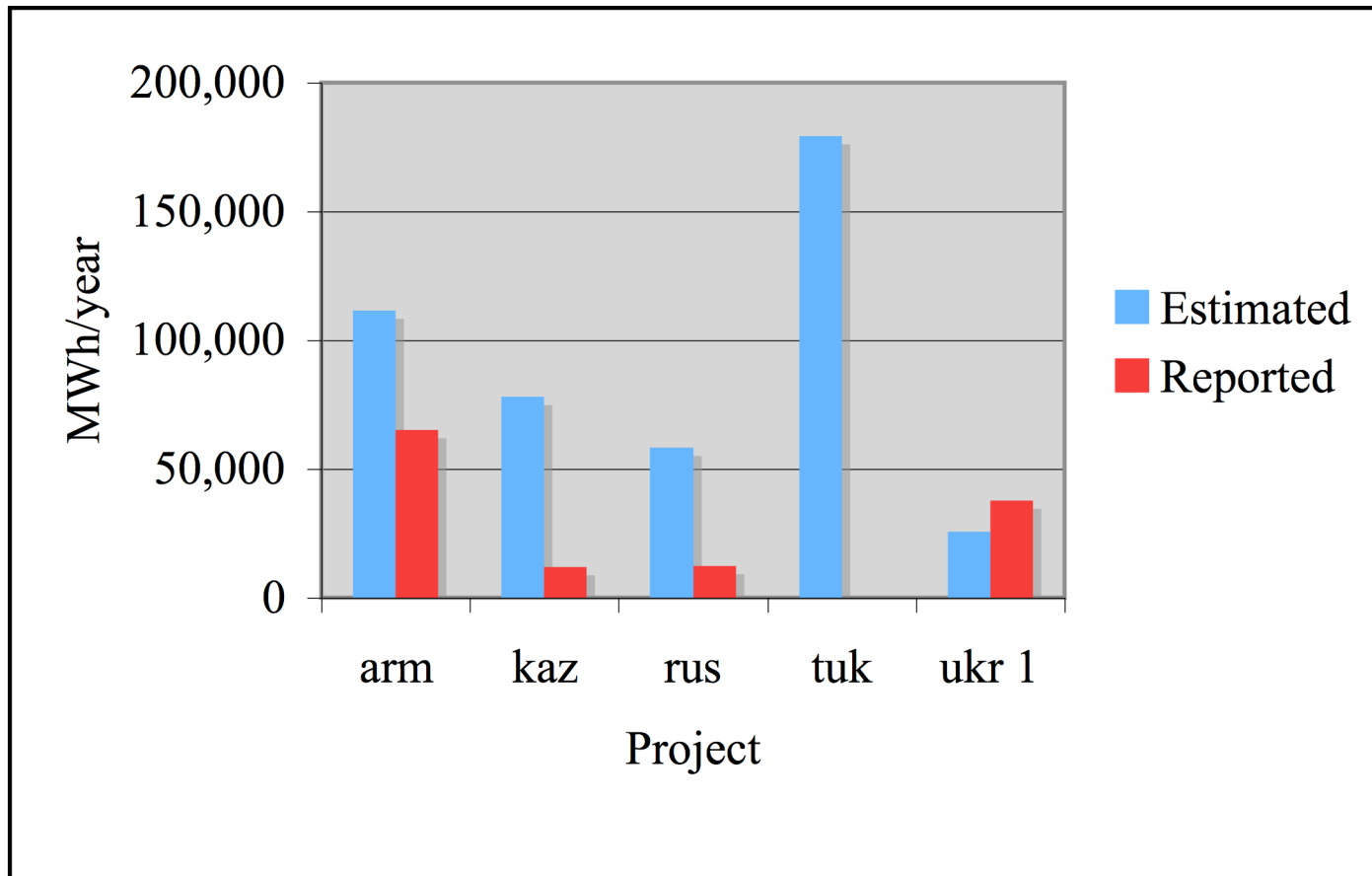
- Document review of “project results”
- Attempt to estimate missing data, standardize units
- Classification of *estimated* and *assessed*
 - Direct energy savings
 - Indirect energy savings
 - Direct GHG emissions mitigation
 - Indirect GHG emissions mitigation
- Examination of other factors



Findings: Energy Savings

- Direct savings:
 - Assessed performance totaled 28% of estimates
- Indirect savings:
 - Overstatement of indirect energy savings in all projects
 - No replication in projects completed to date

Direct Energy Savings

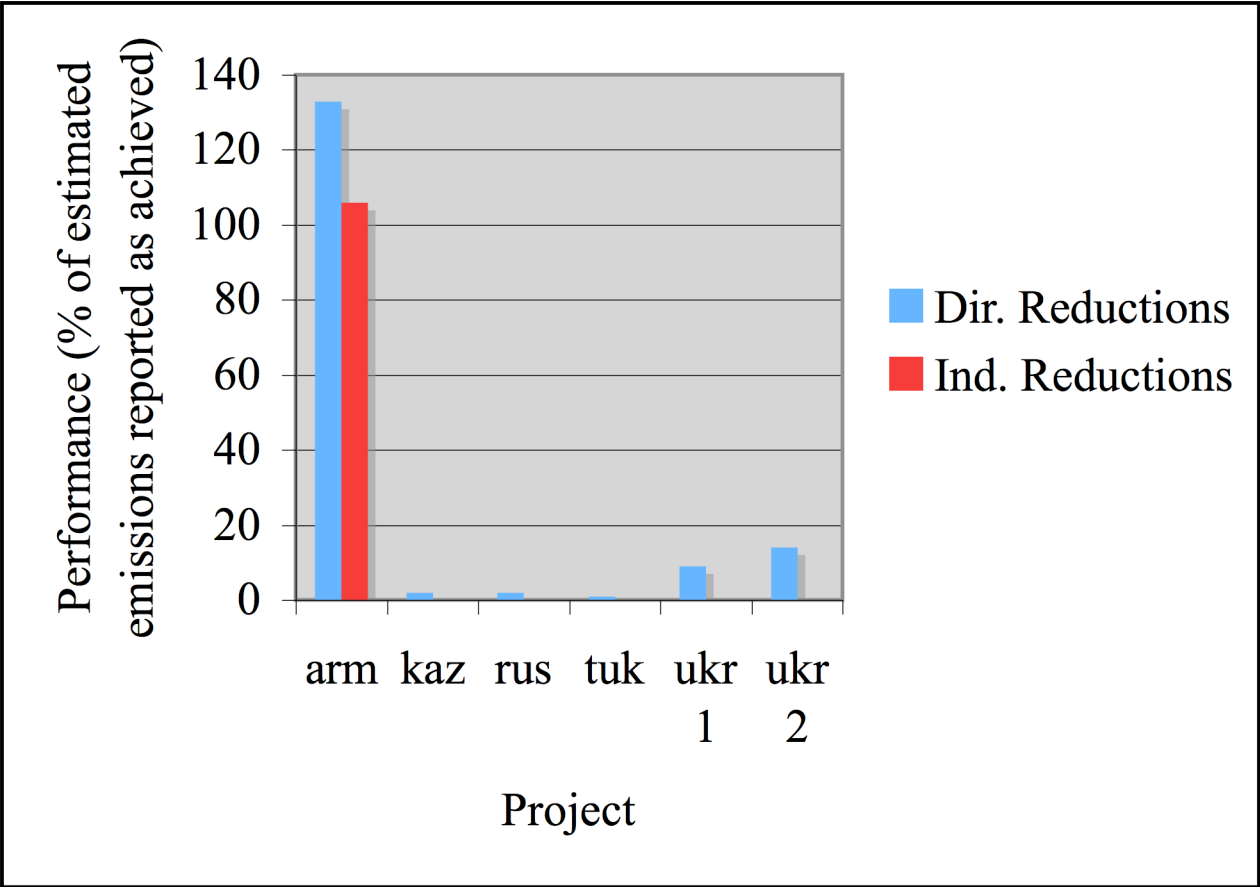


Findings: GHG Reductions

- Direct reductions:
 - Substantial shortfalls compared to estimates in all but one project (1-14% fulfillment)
 - 20% fulfillment of estimates for portfolio as a whole
- Indirect reductions:
 - 6% fulfillment for 4 projects where data were available
 - No reductions in projects completed to date



GHG Emission Reductions



Other variables

- “Age” of project
- Magnitude of initial estimates
- Size of project M&E budget (1-12% of total project size)

What happened?



- Absence of detailed, consistent estimates on energy and GHG savings
- M&E did not necessarily include all indicators
- Failure to replicate
- Rebound effect?

Recommendations

- Standardization of units
- More proactive risk and uncertainty analysis
- Standardization of independent evaluation
- Re-visiting assumptions about project replicability

Implications





Susan Legro

Eco Ltd.

www.ecoharmony.com