

GIS/Regionalization for EERE Models

FY05 Workshop

May 10-11, 2005



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Project Goals

- Identify and develop regional modeling capability with GIS tools for EERE technologies for use in energy market models
- Develop regional modeling capability with GIS tools and apply them, in reduced form, where possible to NEMS, MARKAL, and other integrating models (e.g., POEMS), as well as with technical potential analyses, in order to improve the underlying cost curves, demand curves, and benefits analyses for hydrogen, DG, renewables, and other EERE technologies.

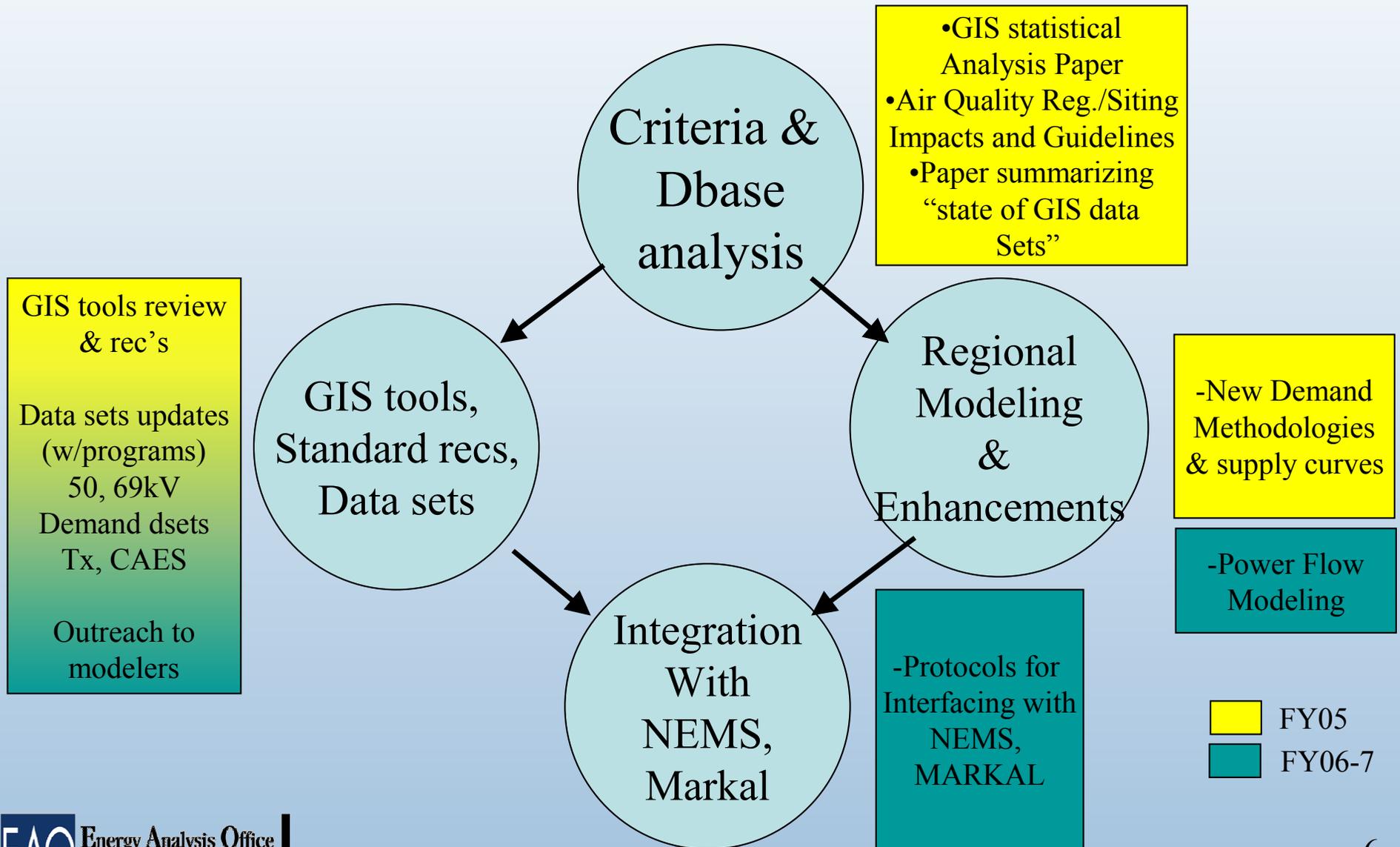
FY04 Workshop Scope

- Review current state of use of GIS and regionalization in NEMS and other EERE models.
 - Identify best practices
 - Identify gaps in EERE Models
 - Prioritize GIS/Regionalization development options
- Output: Recommendations for drafting of a scoping paper that identifies actions for model enhancements for appropriate representation of regionalization of supply and demand.

FY04 Workshop Outputs

- Program Priorities in four principal areas
 1. Criteria for Regionalization
 - Off line models
 - Pre and post processors
 - Disaggregation
 2. GIS data sets
 3. Model enhancements
 4. New Models

Program Structure



FY06 Workshop: Key Questions

- What are the takeaway messages in terms of analysis procedures and questions that modelers should be aware of and use?
- How do analysts determine if they need to use 2 m, vs 2 km, vs county, vs state, vs regional level data?
 - What statistical analysis should be performed to determine how much error they are inducing if they use scale A vs B?
 - Should the analysis of error be done at the data layer and/or at the "output" layer of the model?
- "How can detailed GIS data be summarized and used to inform and improve the far more aggregated models commonly used by DOE?"
- Can we identify bridging strategies that let our regional and national models be sensitive to important geographic and spatial considerations (as identified by GIS analyses) without requiring explicit extensive geographic disaggregation of those models?
- What else should we be addressing??

Ground Rules

- Open engagement
- Seek solutions to any/all questions
- Out of the box thinking and suggestions
- Logistics
 - Speakers: keep on time and allow ample time for discussions
 - Cell phones/pagers to vibrate
 - One conversation, please...
 - Others?

Proceedings

- Presentations
- Synopsis and Key Findings/Recommendations
- Web access

Introductions

- Who
- Where
- What
- Favorite Beer?

Moving Forward

- Other issues?
- Agenda Review
- “Go”