



DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
MARK K. ANDERSON
DEPUTY DIRECTOR

STRATEGIC INDUSTRIES DIVISION
235 S. Beretania Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Tel.: (808) 587-3812
Fax: (808) 586-2536

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To: Carlito P. Caliboso, Chair
Public Utilities Commission

From: Maurice H. Kaya 

Subject: Comments on Act 95 Workshops and Technical Paper

Thank you for the opportunity to provide these comments on the Act 95 Workshops, conducted October 3-5, 2005, and the Commission's consultant's (Economists Incorporated (EI)) technical paper, *Planned Computer Simulations Facilitating the Analysis of Proposals for Implementing the Renewable Portfolio Standards Provision in Hawaii*.

We provided initial comments on EI's technical paper with our comments on the Second Concept Paper. They primarily addressed the need for additional details on the utility oil price forecasts obtained by the consultant for use in their model. We also presented perspectives on future oil prices, and stated some questions and concerns about EI's use of forecasts used by the HECO companies in their IRP processes.

As DBEDT and several other stakeholders mentioned in the Technical Workshop on October 5, 2005, it would be useful to learn more about the details of the complete structure of the model, how the model works, the data to be used in it, and other technical aspects of the model. This could enable a deeper level of collaboration and contribution by stakeholders in the modeling process.

We believe that the ultimate results of the Commission's Act 95 collaborative could benefit by adopting what DBEDT interpreted the discussion to suggest for this technical stage, and perhaps subsequent stages of the effort:

1. Expand and deepen the technical transparency of the process. For example, EI could post technical information on the components of its model, along with ideal formats for stakeholder-provided data, and other input on a web site.

2. Establish commission process guidelines and a systematic set of procedures for interactive participation by stakeholders with EI at the technical level.

For example, the commission could set forth how stakeholders may provide data and other input for consideration and use, and by what specific steps, timelines, mechanisms, etc., that this technical interaction and participation would be implemented.

3. Contingent on budget and work scope, provide for at least one "off-the-record" dry run of the model for improved stakeholder technical understanding and in-depth interaction by commission staff, stakeholders, and EI for technical adjustments via additional revised data and other inputs.

We respectfully request that the Commission consider establishing the suggestions outlined above, or similar procedures to provide more transparency and an opportunity to participate in developing the model to be used to evaluate options for incentive regulation of the utilities under Act 95, SLH 2004.

Specifically, the Commission may want to consider including a review process to occur before, during, and after the model evaluations take place. The review process could be facilitated by posting model inputs, test run results, and preliminary run results on a website for review and comment. In particular, we would like to see the complete data sets to be input in order to evaluate their consistency and accuracy. We recognize that there may be a variety of views about data accuracy, but these can be accommodated by running a variety of scenarios.

In addition, if found useful, the Commission may wish to consider using a similar process and procedures for technical or more in depth interactive participation in other elements of the Act 95 collaborative.

Comments on EI's Assumptions about the Utilities as presented in the Technical Paper.

1. **HECO.** To clarify the basis of our concerns, we have reproduced Appendix A: Specific Assumptions for HECO below. We cite the comments and questions we have in each area.
 - **Load:** Without access to the raw data, it is not possible to ascertain the bases for the sales and peak demand forecasts. It is our understanding that the seasonal load shape is changing, with growing air conditioning demand helping to create a secondary

our understanding that the seasonal load shape is changing, with growing air conditioning demand helping to create a secondary afternoon peak, which has approached the evening peak on occasion. Therefore, it would be useful for EI to provide details on the technical assumptions.

- **Capacity and Generation.** It would be useful for EI to explain its method and rationale for determining and using the high maximum reserve margin listed on the Table. Did EI consider using HECO's loss of load service criteria to establish an appropriate reserve margin?
- **Fuel and O&M Costs.** It would be useful for EI to more fully explain the bases for the fuel and O&M cost growth rates depicted on the Table. Specifically, without additional explanation we cannot ascertain the bases for fuel cost growth rate estimates; i.e., whether the estimates are based on forecast fuel prices and/or estimates of growth in fuel use, and, thus, growth in overall costs.

An explanation as to why thermal unit fixed costs are judged to be constant in all cases would also be useful.

Appendix A: Specific Assumptions for HECO

HECO	Input	Assumption	Source
Load	Energy sales	Growth rate between 0.61% and 3.35%	HECO
	Seasonal load shape	Constant	HECO
	Peak demand	Growth rate between 0.63% and 3.47%	HECO
Capacity and Generation	Minimum reserve margins	0%	HECO
	Maximum reserve margins	50%	HECO
Fuel and O&M Costs	Diesel	Growth rate between 0% and 6.11%	HECO
	Coal	Growth rate between 1.83% and 3.54%	HECO
	Biomass	0% growth	HECO
	Low-sulphur fuel oil	Growth rate between 0% and 9.28%	HECO
	Thermal unit costs	Thermal unit fixed and variable costs constant	HECO

2. **Comments on Assumptions for the Other Utilities.** Our concerns about assumptions for other utilities in the areas of Load, Capacity and Generation, and Fuel and O&M costs are generally the same as for HECO, but we have the following comments and questions on other information presented:

- **HELCO.** Hydro generation and seasonal distribution are historically not constant. They vary significantly as none have reservoirs. What is meant by transactions, INDS, and Prop.?
- **MECO Maui.** What is meant by transactions?
- **MECO Molokai and MECO Lanai.** Information presented in Appendix C for Molokai and Lanai suggests that EI intends to use HECO system-wide averages for many parameters. These divisions of MECO are relatively small, but the assumptions cited could be improved by obtaining primary data from MECO. For example, MECO has a forecast for energy sales and peak demand growth, and there are existing records of load shape, which could be used to forecast the future load shape. These divisions' reserve margins can be derived from MECO's forecast and IRP plans. Only medium sulfur diesel fuel is used on Lanai and Molokai and data is available on actual heat content. Estimates of growth in fuel and O&M costs should be specific to these two divisions.
- **KIUC.** Appendix D suggests that EI plans to use many of its own assumptions to model the KIUC system. We recommend that EI seek the needed information from KIUC.

Thank you for the opportunity to offer these comments.